ADMINISTERED PRICES

UNIVERSITY
OF MICHIGAN

JAN

MAIN
READING ROOM

HEARINGS

BEFORE THE

SUBCOMMITTEE ON ANTITRUST AND MONOPOLY

OF THE

COMMITTEE ON THE JUDICIARY

UNITED STATES SENATE

EIGHTY-FIFTH CONGRESS

FIRST SESSION

PURSUANT TO

S. Res. 57

AUGUST 8, 9, 10, 12, 15, 16, 20, 21, 22, OCTOBER 21, 22, 29, 30,
NOVEMBER 4 AND 5, 1957

PART 4

Steel

(Appendix B)

Printed for the use of the Committee on the Judiciary

UNITED STATES
GOVERNMENT PRINTING OFFICE
95009 O WASHINGTON : 1958

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price $1.25

COMMITTEE ON THE JUDICIARY

JAMES O. EASTLAND, Mississippi, *Chairman*

ESTES KEFAUVER, Tennessee	ALEXANDER WILEY, Wisconsin
OLIN D. JOHNSTON, South Carolina	WILLIAM LANGER, North Dakota
THOMAS C. HENNINGS, JR., Missouri	WILLIAM E. JENNER, Indiana
JOHN L. McCLELLAN, Arkansas	ARTHUR V. WATKINS, Utah
JOSEPH C. O'MAHONEY, Wyoming	EVERETT McKINLEY DIRKSEN, Illinois
MATTHEW M. NEELY, West Virginia	JOHN MARSHALL BUTLER, Maryland
SAM J. ERVIN, JR., North Carolina	ROMAN L. HRUSKA, Nebraska

SUBCOMMITTEE ON ANTITRUST AND MONOPOLY

ESTES KEFAUVER, Tennessee, *Chairman*

THOMAS C. HENNINGS, JR., Missouri	WILLIAM LANGER, North Dakota
JOSEPH C. O'MAHONEY, Wyoming	EVERETT McKINLEY DIRKSEN, Illinois
MATTHEW M. NEELY, West Virginia	ALEXANDER WILEY, Wisconsin

PAUL RAND DIXON, *Counsel and Staff Director*

DEPOSITED BY THE
UNITED STATES OF AMERICA

CONTENTS

APPENDIX B

MATERIAL RELATING TO UNITED STATES STEEL CORP.

Backman, Dr. Jules, professor of economics, New York University: Page
Steel Prices, Profits, Productivity and Wages 1419
Importance of Steel Prices in Consumer Price Index 1527
Federal Trade Commission, *In the Matter of United States Steel Corporation et al.*—Complaint, findings, and order—docket No. 760, July 21, 1924 1226
United States Court of Appeals for the Third Circuit, decree of affirmance and enforcement, *United States Steel Corporation et al.* v. *Federal Trade Commission*, No. 6796, March term, 1938 1291
United States Supreme Court: *United States* v. *United States Steel Corporation et al.*—Appeal from the District Court of the United States for the District of New Jersey, decided March 1, 1920 1177

MATERIAL RELATING TO BETHLEHEM STEEL CORP.

Bethlehem Steel Third Period Net Fell From Second Quarter but Topped 1956: Article from the Wall Street Journal, November 1, 1957 1397
Blair, John M., chief economist: Memorandum, dated November 20, 1957, to Paul Rand Dixon, counsel and staff director, on letter of November 14, 1957, from Bethlehem Steel Corp 1364
Estimated reduction in cost of making steel by Bethlehem resulting from fall in price of scrap (table) 1345
Homer, A. B., president, Bethlehem Steel Corp.:
Dixon, Paul Rand, counsel and staff director of subcommittee:
Letter to, dated October 11, 1957, with various enclosures 1329
Letter to, dated December 19, 1957 1535
Kefauver, Senator Estes, chairman of subcommittee:
Letter to, dated August 1, 1957 1343
Letter to, dated November 14, 1957 1363
Letter to, dated November 19, 1957 1535
O'Mahoney, Senator Joseph C.:
Letter to, dated November 11, 1957 1362
Kefauver, Senator Estes, chairman, Antitrust and Monopoly Subcommittee: Letter, dated November 18, 1957 to A. B. Homer, president, Bethlehem Steel Corp 1363
Notice of special meeting of stockholders of Bethlehem Steel Corp., on September 17, 1957, with an exhibit of a voting proxy 1346

MATERIAL RELATING TO NATIONAL STEEL CORP.

Dixon, Paul Rand, counsel and staff director, Subcommittee on Antitrust and Monopoly: Letter, dated October 11, 1957, to George M. Humphrey, chairman of the board, National Steel Corp 1390
Gardner, Fred V., chart on National Steel Corp 1536
Humphrey, George M., chairman of the board, National Steel Corp.: Dixon, Paul R., counsel and staff director, Subcommittee on Antitrust and Monopoly: Letter dated October 8, 1957 1390
Kefauver, Senator Estes, chairman, Subcommittee on Antitrust and Monopoly:
Letter to, dated October 8, 1957 1390
Humphrey, George M., chairman of the board, National Steel Corp.:
Letter to, dated October 17, 1957 1391
Letter to, dated October 18, 1957 1391
Press release October 29, 1957, with a table summarizing consolidated income 1416

MATERIAL RELATING TO NATIONAL STEEL CORP.—Continued

Page

Rauck, W. Gordon, of Thorp, Reed & Armstrong: Letter, dated August 30, 1957, to George Clifford, attorney-investigator of subcommittee, with an enclosure ---- 1396
Shroads, Paul E., senior vice president, National Steel Corp.: Letter, dated October 11, 1957, to Paul R. Dixon, counsel and staff director of subcommittee, with enclosures ---- 1392

MATERIAL RELATING TO TECHNOLOGICAL PROCESSES

Department of State dispatches re new technological developments in iron and steel production:
No. 317, dated October 15, 1957, from American Embassy, Vienna ---- 1365
No. 427, dated October 21, 1957, from American Embassy, Stockholm ---- 1367
No. COLUX D–49, dated October 15, 1957, from Luxembourg, with enclosures ---- 1369
Economic Aspects of the Oxygen Converter Process: Paper by W. C. Rueckel, vice president, and J. W. Irvin, associate engineer, Kaiser Engineers, presented at the AISE meeting in Cleveland, Ohio, September 28, 29, 30, and October 1, 1954 ---- 1386
Hanley, E. J., president, Allegheny Ludlum Steel Corp.: Statement of ---- 1416

ADDITIONAL INFORMATION SUBMITTED FOR THE RECORD

Changes in base prices of carbon steel products, August 1956–July 1957—10 leading companies (tables) ---- 1338
Depreciation and High Costs, Bulletins Issued by the Committee on Accounting Procedure:
Accounting Research Bulletin No. 33 (December 1947) ---- 1327
Accounting Research Bulletin No. 43 ---- 1328
Eighteen highest paid men in United States industry (table) ---- 1337
Federal Trade Commission docket No. 5508, *In the Matter of American Iron and Steel Institute, et al.:*
Complaint ---- 1296
Amended complaint ---- 1306
Findings as to the facts and conclusions ---- 1315
Order to cease and desist ---- 1323
Order dismissing amended complaint as to respondent E. S. Liquidating Co.—formerly Empire Steel Corp ---- 1325
Order dismissing amended complaint as to respondent The Phoenix Iron Co ---- 1326
Order modifying order to cease and desist ---- 1326
Pittsburgh Steel Scrap Prices Fall $4 a Ton to Lowest Level in 2 Years: Article from the Wall Street Journal, October 18, 1957 ---- 1344
Scrap iron and steel prices—No. 1 heavy melting steel (table) ---- 1399
Tin Market Weak and Declining—Prices One-half Cent to Five-eights Cent Lower: Article from American Metal Market, November 2, 1957 ---- 1401
Tin prices—New York, Prompt (table) ---- 1399
Worldwide slump in demand sends scrap rocket earthward (chart) ---- 1400
Material used as basis for charts presented by subcommittee on November 5, 1957 ---- 1404
Cold-rolled sheets ---- 1408
Cold-rolled strip ---- 1409
Ferromanganese ore (imports) ---- 1415
Hot-rolled bars, carbon ---- 1406
Hot-rolled sheets ---- 1404
Iron ore ---- 1414
Tinplate and terneplate ---- 1405
Pipe and tube ---- 1413
Plates ---- 1411
Rails ---- 1412
Reinforcing hot-rolled bars ---- 1407
Structural shapes ---- 1410

UNITED STATES *v.* UNITED STATES STEEL CORPORATION ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY.

No. 6. Argued March 9, 12–14, 1917; restored to docket for reargument May 21, 1917; reargued October 7–10, 1919.—Decided March 1, 1920.

That an industrial combination is formed with the expectation of achieving a monopoly is not enough to make it a monopoly within the meaning of the Anti-Trust Act. P. 444.

Held, that the power attained by the United States Steel Corporation, much greater than that of any one competitor, but not greater than that possessed by them all, did not constitute it a monopoly. *Id.*

The fact that a corporation, alleged to be an illegal combination, during a long period after its formation persuaded and joined with its competitors in efforts, at times successful and at times not, to fix and maintain prices in violation of the Anti-Trust Act, does not warrant present relief against it, if the illegal practices were transient in purpose and effect, were abandoned before the suit was begun because of their futility and not for fear of prosecution, and have not since been resumed; and if no intention to resume them or dangerous probability of their resumption is shown by the evidence. Pp. 444 *et seq.*

Purpose and effect of the Steel Corporation's acquisition of control of the Tennessee Coal & Iron Company, considered, in the light of President Roosevelt's prior approval of the transaction and his testimony concerning it. P. 446.

Upon the question whether the power possessed by the Steel Corporation operated *per se* as an illegal restraint, *held* that testimony of its officers, its competitors, and hundreds of its customers, to the effect that competition was not restrained and that prices varied or remained constant according to natural conditions, must be accepted as clearly outweighing a generalization advanced by government experts that constancy of prices during certain periods evinced an artificial interference. P. 447.

An industrial combination, (short of a monopoly,) is not objectionable under the act merely because of its size—its capital and power of production—or merely because of a power to restrain competition, if not exerted. Pp. 447, 450 *et seq.*

The act prohibits overt acts, and trusts to their repression and punishment. P. 451.

The fact that competitors of a combination voluntarily follow its prices does not establish an unlawful restraint; the act does not compel competition. Pp. 449–451.

In commanding the courts to "prevent and restrain violations" of it, the Anti-Trust Law has regard to conditions as they may exist when relief is invoked and to the usual powers of a court of equity to adapt its remedies to those conditions. P. 452.

The act does not expect the courts to enforce abstractions to the subversion of its own purposes, but leaves to them to determine, in each instance, the relief appropriate for the execution of its policy. *Id.*

Therefore, admitting that the Steel Corporation was in origin a combination of competing companies actuated by an unlawful purpose, yet it being proved and found in this case that that purpose, and illegal practices which followed the combination, were abandoned as futile months before this suit was begun, and that the combination, viewed as of today, is not in itself or by its conduct offensive to the statute, the policy of the statute, which respects the public interest as paramount, would be defeated rather than subserved were the court, for retrospective reasons merely, to destroy the combination, or separate some of its subsidiaries as suggested, and thereby destroy or impair the investments invited of the public, and the foreign trade and other large developments made during the ten years that intervened before the Government began any legal attack. Pp. 452 *et seq.* *Standard Oil Co.* v. *United States*, 221 U. S. 1; and *United States* v. *American Tobacco Co.*, 221 U. S. 106, distinguished.

No feasible way of dissolving the combination and yet protecting its foreign trade, under the Webb Act, c. 50, § 2, 40 Stat. 516, or otherwise, has been suggested. P. 453.

223 Fed. Rep. 55, affirmed.

THE case is stated in the opinion.

Mr. Assistant to the Attorney General Ames and *Mr. Henry E. Colton*, Special Assistant to the Attorney General, for the United States:[1]

[1] At the former hearing the case was argued by *Mr. Solicitor General Davis*, *Mr. Assistant to the Attorney General Todd* and *Mr. Henry E. Colton*, Special Assistant to the Attorney General. *Mr. Attorney General Gregory* and *Mr. Robert Szold* also were on the brief, from which the argument is abstracted.

In comprehensive terms the substance of the charge is: (1) That between 1898 and 1900 combinations were formed in various branches of the iron and steel trade, not as an incident of normal growth, but with the purpose and effect of unduly restricting competition, and that they still exist, contrary to the Anti-Trust Act of July 2, 1890. (2) That in 1901, by means of a holding company, these several illegal combinations, each dominant in its respective field, and other powerful units, were all brought together in one super-combination of overwhelming power, which, augmented by further acquisitions, still exists, unduly restricting competition in the iron and steel trade as a whole and in practically every important branch thereof, contrary to the same act of Congress.

The several combinations formed during the period 1898–1900 greatly increased prices in almost every instance, especially the combinations affecting the lighter finished products, such as tubes, wire nails, tin plates, etc. Prices of pig iron, semi-finished products and rails also were increased. But notwithstanding the concentration of control in particular lines resulting from these combinations, competition was still able to make itself felt, taking the industry as a whole, and as the year 1900 drew to a close was threatening to become very active, and, with the revival of active competition, prices, which had been enormously increased, underwent substantial declines. Then was formed the present corporation—a holding company, which controls the important acts and policies of the constituent combinations, and, among other things, generally determines the prices which they may charge for their finished products. As the proposal for the super-combination began to take form, prices, which had receded with the revival of competition in the latter half of 1900, began to rise again. The upward movement became marked as the organization of the combination was perfected. While some have since fallen, these prices have nevertheless been maintained

by the combination at a substantially higher level than prevailed during competitive periods prior to its formation.

Except for the internal alterations and further acquisitions, which increased the control, the several combinations above described and the super-combination in which they were all united have continued down to the present time without change of substance. Their proportion of the trade, whilst not quite so great as at first, is still overwhelmingly preponderant.

Congress was moved to pass the Anti-Trust Act by two main considerations: (1) The desire to preserve the competitve system of industry. (2) The conviction that that system was threatened by the undue concentration of commercial power resulting chiefly from the unrestricted exercise of the right of combination.

Every combination which by its necessary effect or because of the character of the means employed threatens the normal operation of the law of competition, in other words, unduly restricts competition, is therefore within the purview of the act.

It was not intended, however, to set a limit to the enlargement of a business by normal growth, the competitive system being in no danger from that quarter.

The purpose of the parties is important in determining the question of normal growth, but, that out of the way, it is of no further consequence where the necessary effect of the combination is unduly to restrict competition.

Except as throwing light on the purpose of the parties, it is immaterial how the combination is created, whether through simple agreement, through the old form of trust, through a holding company, or through the actual purchase and consolidation of plants.

Competition may be unduly restricted through voluntary combinations of competitive traders and trade units no less than by combinations to exclude one or more such from their right to trade.

Whether restriction of competition through voluntary combinations is undue depends primarily upon the extent of the restriction. Without attempting to draw the exact line, the restriction is certainly undue where the combination embraces units which together occupy a preponderant position in a given industry.

What constitutes a preponderant position must be determined in the light of conditions in the particular branch of trade affected. The principal factors to be considered are (1) the portion of the trade engrossed by the combination as compared with the portion possessed by each of its competitors as well as with the whole, and (2) the extent of the control, if any, acquired by the combination over raw materials or over the agencies of transportation and of distribution or over the reserve supply where the article of trade is one the supply of which is limited by nature.

At the time they were combined under the control of the United States Steel Corporation the American Steel & Wire Company, the American Tin Plate Company, the American Sheet Steel Company, the American Steel Hoop Company, the National Tube Company and the American Bridge Company were severally combinations in restraint of trade, each being a combination of formerly competitive units together occupying an overwhelmingly preponderant position in a distinct branch of the iron and steel trade and each having been organized for the purpose of suppressing competition and increasing prices.

It has never been doubted that combinations of this type, embracing a dominant proportion of those engaged in a particular industry and formed for the express purpose of suppressing competition between them, are combinations in restraint of trade. *Addyston Pipe Co.* v. *United States*, 175 U. S. 211; *Swift & Co.* v. *United States*, 196 U. S. 375, 394; *Dr. Miles Medical Co.* v. *Park & Sons Co.*, 220 U. S. 273, 408. Nor is it material, their purpose and effect being what they were, that the combinations here assailed were created in corporate form instead of by

loose agreement. *United States* v. *American Tobacco Co.*, 221 U. S. 106, 176, 181. Indeed, where, as here, corporations simply exchange their plants and businesses for stock in a consolidated corporation, the resulting combination is in no respect different in principle from a combination in the form of trust which the statute specifically prohibits. *Northern Securities Co.* v. *United States*, 193 U. S. 197, 326, 327; *United States* v. *Reading Co.*, 226 U. S. 324, 352-363; *s. c.* 183 Fed. Rep. 427, 470; *Patterson* v. *United States*, 222 Fed. Rep. 599, 619, 620; Noyes, Intercorporate Relations, § 354; Eddy, Combinations, § 622. Wherefore we submit that the illegality of these combinations is not merely debatable, as the defendants themselves admit as to some, but is conclusive as to all. They were still occupying the illegal position thus acquired in various branches of the steel trade when united under the control of the United States Steel Corporation in 1901.

The Steel Corporation is a combination in restraint of trade, because it is not the result of natural trade growth but is a mere instrumentality for combining competing corporations which together occupy an overwhelmingly preponderant position in trade and commerce in iron and steel products generally. The group of independent plants and businesses combined under one control through the corporation included the largest and most powerful competitors in practically every branch of the iron and steel industry in rails; plates; structural shapes; wire rods and wire products; hoops, bands, and cotton ties; skelp; wrought pipe and tubular goods; seamless tubes; bars; billets and sheet bars. And not only were the competitors united under the control of the Corporation the largest and most powerful units in practically every branch of the iron and steel industry, but generally speaking they were splendidly grounded as regards the production of the basic products—ore, pig iron, ingots. This is sustained by the findings of Woolley and Hunt, JJ., in the court below and by the investigation made by the Bureau of Corporations.

The preponderant position and the dominance of this combination is manifested by its capital as compared with that of competitors; its proportion of the total production; its proportion of the total production as compared with that of each of its principal competitors; its proportion of ore reserves; its control over transportation of ore; its effect upon prices; concerted maintenance of prices under its leadership; and opinion evidence as to its power.

Whilst in our view of the law a combination of able competitors occupying an overwhelmingly preponderant position in a given trade, such as the combination embodied in the Corporation, unduly restricts competition by its necessary effect, and therefore is unlawful regardless of purpose, nevertheless it is appropriate to show a wrongful purpose as a matter of aggravation. It is elementary, of course, that the purposes of illegal combinations are seldom capable of proof by direct testimony, but must be inferred from circumstances. *Eastern States Retail Lumber Dealers' Assn.* v. *United States*, 234 U. S. 600, 612; *Reilley* v. *United States*, 106 Fed. Rep. 896; *United States* v. *Sacia*, 2 Fed. Rep. 754, 757; *Regina* v. *Murphy*, 8 C. & P. 397, 404. The considerations going to show that the controlling purpose of this super-combination was not the legitimate development of trade, but suppression of competition and exploitation of the public, are: the form of the combination—a holding company not itself engaged in trade at all; the union of so many competitors controlling so large a proportion of the trade; the general competitive situation, falling prices, etc., immediately before the formation of the combination; increase in prices immediately following formation of the combination; gross overcapitalization of the combination in anticipation of excessive profits; enormous promoters' profits; cancellation by the combination of contracts for extensions, etc., previously entered into by constituent companies; and subsequent acquisitions. (See the findings of Woolley and Hunt, JJ., and of the Bureau of Corporations.)

We are dealing here with a combination of competitors in the truest sense and not with the mere purchase by one competitor of the business of another as an incident of normal development. The distinction between a mere purchase of a competing business and a combination of competing businesses clothed in the form of purchases is sharply drawn in *Shawnee Compress Co.* v. *Anderson*, 209 U. S. 423. See Noyes, Intercorporate Relations, § 354. If the vast aggregation of competing businesses here involved occupying an overwhelmingly preponderant position in practically every branch of the iron and steel industry had been combined by executory agreement or in the old form of trust there would be none to dispute the illegality of the transaction. The legal situation is not changed by substituting a holding company as the instrument of combination. The vesting in such a company of the capital stocks of a group of able competitors for the purpose of centralizing control is no more lawful, is no more a normal method of business development, than the similar centralization of control in common trustees under the old form of trust. In such case, indeed, the holding company is but the old trust in corporate form. *Northern Securities Co.* v. *United States*, *supra*; *Standard Oil Co.* v. *United States*, 221 U. S. 1; *Temple Iron Co.* v. *United States*, 226 U. S. 324; *s. c.* 183 Fed. Rep. 427. It is literally a case, therefore, of the stockholders of a group of competing corporations transferring the control of each into the hands of a committee of trustees—a form of combination in restraint of trade which has ever been regarded as peculiarly obnoxious. If competitors controlling half the trade not alone in one product or in two but in an entire series of products constituting one of the grand divisions of industry may thus combine through a holding company, to what lengths can the process go without offending the law? If one-half of the steel industry may be thus combined through one holding company, certainly those controlling the other half would have the right to combine through another holding company. And

of course if it be lawful to centralize control of the steel industry in two holding companies it would be equally lawful to centralize control of every other industry in two holding companies. Such undue concentration of control over industry was the very evil which the act was intended to prevent. *United States* v. *Reading Co.*, 226 Fed. Rep. 229, 272.

The Corporation is also an instrumentality for uniting and enlarging the power of a group of combinations of competitive units in particular branches of the iron and steel trade, each in and of itself unlawful. There is no likeness between this case and *United States* v. *Winslow*, 227 U. S. 202, 217. This case presents a parallel to the *American Tobacco Case*, *supra*, where there was a combination in restraint of trade not in cigarettes alone, nor in smoking tobacco alone, nor in chewing tobacco alone, but in the whole tobacco industry.

This is not a case where the purpose was "integration." Integration consists in combining supplementary, noncompetitive trade units. An illustrative case is *United States* v. *Winslow*, *supra*. If, therefore, we were successful in showing that the corporations combined in this case through the holding company are either competitors themselves or illegal combinations of competitive businesses, the idea of integration is at once excluded. You can not centralize control of an entire industry by first separately combining competitors in the various branches thereof and then uniting them in one super-combination and hope to escape the prohibitions of the law by calling what was done "integration." Moreover, the units combined in 1901 through the Corporation were already, for the most part, highly integrated. No one, of course, denies the advantage of concentrating under one management the various stages of steel manufacture from the ore mine to the finishing mill. This can be done, however, and can be best done, just as economical size can be attained, without setting up in every branch of trade a combination of

competitors with power to exercise substantial dominance over the rest.

The contention that a combination of such size and power was a necessary means to attain efficiency and to promote foreign trade is irrelevant in law. It is but another way of saying that good intentions can save the combination from illegality. *Thomsen* v. *Cayser*, 243 U. S. 66; *United States* v. *Trans-Missouri Freight Assn.*, 166 U. S. 290, 341; *Addyston Pipe Co.* v. *United States*, 175 U. S. 211, 234, 243; *Swift & Co.* v. *United States*, 196 U. S. 375, 396. The intent to violate the law implied from doing what the law prohibits renders immaterial every other intent, purpose, or motive. Bishop, New Criminal Law, § 343; Holmes, The Common Law, p. 52. Applying this principle, this court from the very beginning has held that a contract or combination by its own "inherent nature or effect," without more may "restrain trade within the purview of the statute." Any other construction would require courts to decide not only whether a given combination prevents the existence of effective competition or constitutes a virtual monopoly, but whether in their opinion monopoly would not be, on the whole, a better policy than competition—i. e., would compel them to act on frankly legislative grounds. *Park & Sons Co.* v. *Hartman*, 153 Fed. Rep. 24, 46. Congress rightly believed that the advantages of large business units, in so far as they are real and substantial, would inevitably assert themselves by normal growth. It closed the short cut to those advantages—monopolistic combination—because danger lies that way. "If there is evil in this it is accepted as less than that which may result from the unification of interest, and the power such unification gives." *National Cotton Oil Co.* v. *Texas*, 197 U. S. 115, 129. "Competition is worth more to society than it costs." *Vegelahn* v. *Guntner*, 167 Massachusetts, 92, 106. Furthermore, even if it would have been lawful for the many independent businesses combined through this holding company to unite to some extent to develop foreign

trade—by joint selling agencies, for example—that can not justify the complete and permanent suppression of competition between them in domestic trade. *United States* v. *Corn Products Refining Co.*, 234 Fed. Rep. 964, 1016; *United States* v. *Union Pacific R. R. Co.*, 226 U. S. 61, 93.

The contention that such was the purpose is also unfounded in fact.

As for the contention that competition has increased while the combination's proportion of the trade has decreased, it is true that as regards the proportion of the trade in steel products possessed by the combination there has been some decline from the highwater mark reached shortly after its formation, but there has been no such decline as to curtail the power of the combination.

It is rather the usual thing in such cases for the combination to be able to show some relative decline in its proportion of the trade. It was so held with the Standard Oil Company and with the American Tobacco Company. In fact, it is so uniformly the case as to excite the suspicion that combinations of this character, having found they can dominate the trade with a smaller proportion of it than they started with, voluntarily yield a part in the belief that they thereby put themselves in a better position to face the law. But be this as it may, where, as here, the decline still leaves the combination in an overwhelmingly preponderant position, it is of no legal consequence whatever. In such a case the original vice persists and the combination is a "continually operating force," restraining trade within the meaning of the first section of the act, *Standard Oil Co.* v. *United States*, *supra*; *United States* v. *Union Pacific R. R. Co.*, 226 U. S. 61, 96; *United States* v. *Kissel*, 218 U. S. 601; and a "perennial violation of the second section" prohibiting monopoly, *Standard Oil Co.* v. *United States*, *supra*, 74; *Patterson* v. *United States*, 222 Fed. Rep. 599, 625; *United States* v. *Corn Products Refining Co.*, 234 Fed. Rep. 964, 1018.

The present bill charges a combination to suppress

competition between the parties to the combination themselves. In such a case the only question is whether the combination embraces competitors in sufficient number and of sufficient importance to make the resulting restriction of competition a substantial or undue restriction. Whether such a combination is also attempting to hinder the competition of those outside the combination is of no weight except as a matter of aggravation.

The contention that the combination is not unlawful because its power though great is yet not great enough to enable it alone to fix and maintain prices would require a combination of competitors to amount to a monopoly to fall within the prohibition. This theory was rejected by this court in the first case under the Anti-Trust Act which came before it. *United States* v. *E. C. Knight Co.*, 156 U. S. 1, 16. To the same effect is the language of Mr. Justice Day, then a circuit judge, in *Chesapeake & Ohio Fuel Co.* v. *United States*, 115 Fed. Rep. 610, 624.

Furthermore, neither the circumstance that the Corporation combined with competitors to maintain the higher prices established by the combinations whose stocks it acquired, nor that in ten years while increasing its trade enormously its relative proportion suffered a small decline, justifies the inference that the Corporation could not have maintained the higher prices by the exertion of its own power alone. It would be a strange result if the combination of competitors embodied in the Corporation should escape condemnation because of their illegal conduct in agreeing upon prices with outside manufacturers.

The contention that the case must fail because the combinations have not increased prices, or limited production, or degraded the quality of product, or decreased wages, or decreased the price of raw materials, or oppressed competitors, loses sight of the broader policy of the act, which was, not to wait until the evils enumerated are

already upon us, but to prevent their occurrence by striking at their underlying cause—undue concentration of commercial power through the process of combination. The test of the legality of a combination, therefore, is not its present effect upon prices, wages, etc., nor its present conduct toward the remaining competitors, but its effect upon competition. If its effect is unduly to restrict competition, then it is immaterial that for the time being the combination may exercise its power benevolently. This defense of good conduct has been interposed in many cases of this character, and as many times rejected. Nor is forbearance by a combination from the exercise of its power to drive the remaining competitors from the field, or to prevent new ones from entering, on any different footing from good conduct of any other sort. The cases make no such distinction. Obviously, where a combination takes in so large a proportion of the competitors or competitive units that effective competition no longer exists, it can be no defense to say that the combination is doing nothing to prevent the restoration of competitive conditions.

This contention is based on a construction of the law impracticable in execution.

Mr. Richard V. Lindabury, *Mr. David A. Reed* and *Mr. Cordenio A. Severance*, with whom *Mr. Raynal C. Bolling* was on the brief, for United States Steel Corporation *et al.*, appellees, cited and discussed the following, as revealing what the Anti-Trust Act means by "restraint of trade": Senator Hoar, Autobiography of Seventy Years, vol. II, p. 364; *United States* v. *Du Pont De Nemours & Co.*, 188 Fed. Rep. 127, 150; *United States* v. *Trans-Missouri Freight Assn.*, 166 U. S. 290; *Gibbs* v. *Baltimore Gas Co.*, 130 U. S. 396, 408; *Northern Securities Co.* v. *United States*, 193 U. S. 197, 337, 361; *Standard Oil Co.* v. *United States*, 221 U. S. 1, 58, 60, 61; *United States*

v. *American Tobacco Co.*, 221 U. S. 106, 179; *United States* v. *Terminal Railroad Assn.*, 224 U. S. 383, 394; *Nash* v. *United States*, 229 U. S. 373, 376.

Whether, or to what extent, the *Standard Oil* and *Tobacco Cases* modify the rule laid down by Mr. Justice Peckham in the *Freight Association Case* as applicable to public service corporations is not of account in the present case. That they do make a distinction between restraint of competition and restraint of trade in the case of private trading and manufacturing companies, and do hold that as to such companies the restraint of competition in order to amount to restraint of trade must be undue or unreasonable, is entirely clear, and is recognized in the subsequent cases. These cases also hold, as pointed out by Judge Lanning in the *Du Pont Case*, that whether the restraint of competition in the case of such companies amounts to restraint of trade must be determined upon the facts and circumstances of each particular case.

Applying these principles, the direct and necessary effect of the organization of the Steel Corporation was neither to restrain trade nor create a monopoly, viewed either from the standpoint of competition suppressed or from that of the extent of control acquired over production or raw materials. *Swift & Co.* v. *United States*, 196 U. S. 375; *United States* v. *Standard Oil Co.*, 173 Fed. Rep. 177, 183; *United States* v. *American Tobacco Co.*, 164 Fed. Rep. 700, 719; 221 U. S. 157, 182; *United States* v. *Reading Co.*, 226 U. S. 324, 370.

Notwithstanding the foregoing cases, the Government insists that, as a matter of law, the suppression of competition is undue whenever the combination controls units which together occupy a preponderant position in a given industry, and this without regard to the intentions of those who form it or the after conduct of the combination. We submit that no such test is warranted either by the language of the Anti-Trust Act or by the decisions of

this court. Whether restraint is unreasonable, and therefore undue, is declared in *United States* v. *Terminal Railroad Assn.*, *supra*, to depend upon three things: (1) the extent of such control; (2) the method by which such control was brought about; and (3) the manner in which such control has been exercised. This is but a formulation of the rule laid down in the *Tobacco Case*. But we submit that *a priori* reasoning as to the direct or necessary effect of the organization of the Steel Corporation or as to the result produced by its preponderant position in the industry, if it has such a position, is uncalled for in the present case. When the evidence in the case was closed, thirteen years of the active life of the Corporation had passed. If restraint of trade or monopoly necessarily resulted from its formation or from its so-called preponderant position in the industry, evidence of such restraint or monopoly would appear somewhere in its history; and if such evidence does not appear, it is reasonably safe to conclude that no such result inhered in its organization or position. That the organization did not so result at any time or as to any article of steel production, is, we submit, conclusively shown by the testimony in the case, as pointed out in both opinions of the court below. And not only is this shown by the testimony, but it is also shown that the Corporation never acquired the power either to monopolize or to restrain trade. And this too was found by all the judges of the court below.

No intent to monopolize or to restrain trade is shown by the circumstances which led up to and surrounded the organization of the Corporation. The organization was but a natural and normal development from existing trade and manufacturing conditions and was only notable because of the largeness of the conception which underlay it and the courage exhibited in undertaking to carry it out. But ability to think large and courage to execute the thought are not condemned by the law. Indeed, the

future prosperity of our country must depend in large measure upon the encouragement given to these attributes of the American business man.

Nor is an intent to monopolize or restrain trade evinced by the after-conduct of the Corporation. Throughout its whole career the Corporation has pursued the objects declared by its founders at the time of its formation, decreasing the cost of production, increasing wages, decreasing prices, and greatly extending trade in steel products both at home and abroad. Its treatment of both competitors and consumers has been fair and just; it has neither attempted to oppress the one nor to coerce the other. The few plants which it has purchased were offered to it, and with a single exception they were purchased only because they were needed in the development of the Corporation's business. That exception was the plant of the Tennessee Company, and this was purchased with the approval of the Government for the purpose of preventing the spread of a dangerous financial panic. Instead of promoting pools and combinations, the Corporation destroyed them as early as 1904. Although the manufacturers met together from time to time after the breaking up of the pools, they went no further at their meetings than to mutually exchange information and make declarations of purpose which the petition admits they had a lawful right to do. The Gary dinner movement amounted to nothing more than an endeavor to prevent reckless price-cutting and general demoralization at a time of great industrial peril, and this was sought to be accomplished simply by an appeal to reason and the establishment of a relation of mutual respect and confidence, by which it was hoped to secure open and fair dealing and prevent the misunderstandings out of which nearly all the trade wars of the past had grown. Instead of monopolizing the manufacture of steel, the Corporation's percentage of the country's production has steadily

decreased; instead of monopolizing the supply of ore, the Corporation has confined its purchases to two or three localities, and in the locality where its holdings are largest it has relatively less than many of its competitors and less than its own experts and the experts of its competitors testify that it ought to have. We respectfully submit that by this record the Corporation has proved the *bona fides* of the claim made for it at the time of its organization, that its purpose was the development of a great business along legitimate and permissible lines, and not monopoly or restraint of trade. If, however, the circumstances surrounding the organization left the matter of intent in doubt to be established by the after-conduct of the parties, we now have such after-conduct extending over the long period of thirteen years, and we submit that it completely rebuts any presumption (if any there was) of intent to restrain trade or to acquire a monopoly, and as completely establishes the contrary intent.

Whatever, therefore, may have been the purpose or immediate effect of the organization of the Steel Corporation, it goes for nothing unless it be found that at the time the petition was filed the Corporation was offending or threatening to offend against the Anti-Trust Act. This results from the fact that the action is brought under the third section of that act which authorizes the Attorney General to institute proceedings in equity to prevent or restrain violations of the act. The appeal is to the injunctive power of the court which is never exercised to redress alleged wrongs which have been committed already, but only to restrain those which are still existing or are threatened. High on Injunctions, § 23; Pomeroy's Equitable Remedies, vol. I, § 262.

The Corporation had no monopoly and was not restraining trade when the petition was filed, nor was it threatening to acquire a monopoly or to restrain trade. It has not the power to do either.

We insist that the acquisition of a preponderant position in a trade or manufacture (whether this means size or power) without unlawful intent and without excluding practices, does not constitute restraint of trade or monopoly either at common law or under the Federal Anti-Trust Act when no actual monopoly or actual restraint of trade results therefrom. How could it? Size in itself is nothing as we have already shown. And power to do wrong cannot be confounded with wrongdoing itself without leading to hopeless confusion. We are dealing with a criminal statute. If the acquisition of power to violate a statute is the equivalent of its violation, then all men are guilty, for all have acquired the power to violate not one but many statutes. In the opinions in some of the railroad cases (*United States* v. *Trans-Missouri Freight Assn.*, 166 U. S. 290, 334; *Northern Securities Co.* v. *United States*, 193 U. S. 197, 373; *United States* v. *Union Pacific R. R. Co.*, 226 U. S. 61, 88) are to be found expressions to the effect that it is the scope of combinations of the kind there under consideration and the power to suppress competition and create monopoly which results therefrom that determines the applicability of the Anti-Trust Act. In those cases, however, the corporations combining were under a duty to compete, and any substantial suppression of competition between them was, therefore, illegal—the scope of the combinations (i. e., what they embraced) alone determining their illegality. No such rule has ever been applied to private trading or manufacturing companies, and this for the obvious reason that such companies are under no duty to compete. *Meredith* v. *N. J. Zinc & Iron Co.*, 55 N. J. Eq. 212, 221. In the *Tobacco Case* the combination was condemned because the court thought the conclusion of wrongful purposes and illegal combination was overwhelmingly established by the circumstances surrounding the organization and the after-conduct of the company, showing an ever present intent to drive compet-

itors out of the field and to monopolize the tobacco trade. Nothing, we submit, could be more unreasonable than to condemn every corporation, without regard to its purposes or practices, which happens to exceed in size or trade power any other competitor in the field. A rule which would lead to that result, instead of protecting commerce—which was the object of the Anti-Trust Act—would tend to throttle and destroy it by driving or keeping out of the competitive field all but the incompetents and inefficients.

International Harvester Co. v. *Missouri*, 234 U. S. 199, was decided under the Missouri statute which prohibited any combination that lessened or tended to lessen competition.

The elimination of competition between the units combined by the Steel Corporation did not amount to an undue restriction of competition in the steel trade and so produce a restraint thereof.

Mr. George Welwood Murray for John D. Rockefeller and John D. Rockefeller, Jr., appellees.

Mr. Justice McKenna delivered the opinion of the court.

Suit against the Steel Corporation and certain other companies which it directs and controls by reason of the ownership of their stock, it and they being separately and collectively charged as violators of the Sherman Anti-Trust Act.

It is prayed that it and they be dissolved because engaged in illegal restraint of trade and the exercise of monopoly.

Special charges of illegality and monopoly are made and special redresses and remedies are prayed, among others, that there be a prohibition of stock ownership and exer-

cise of rights under such ownership, and that there shall be such orders and distribution of the stock and other properties as shall be in accordance with equity and good conscience and "shall effectuate the purpose of the Anti-Trust Act." General relief is also prayed.

The Steel Corporation is a holding company only; the other companies are the operating ones, manufacturers in the iron and steel industry, twelve in number. There are, besides, other corporations and individuals more or less connected with the activities of the other defendants that are alleged to be instruments or accomplices in their activities and offendings; and that these activities and offendings (speaking in general terms) extend from 1901 to 1911, when the bill was filed, and have illustrative periods of significant and demonstrated illegality.

Issue is taken upon all these charges, and we see at a glance what detail of circumstances may be demanded, and we may find ourselves puzzled to compress them into an opinion that will not be of fatiguing prolixity.

The case was heard in the District Court by four judges. They agreed that the bill should be dismissed; they disagreed as to the reasons for it. 223 Fed. Rep. 55. One opinion (written by Judge Buffington and concurred in by Judge McPherson) expressed the view that the Steel Corporation was not formed with the intention or purpose to monopolize or restrain trade, and did not have the motive or effect "to prejudice the public interest by unduly restricting competition or unduly obstructing the course of trade." The corporation, in the view of the opinion, was an evolution, a natural consummation of the tendencies of the industry on account of changing conditions, practically a compulsion from "the metallurgical method of making steel and the physical method of handling it," this method, and the conditions consequent upon it, tending to combinations of capital and energies rather than diffusion in independent action. And the

concentration of powers (we are still representing the opinion) was only such as was deemed necessary, and immediately manifested itself in improved methods and products and in an increase of domestic and foreign trade. Indeed an important purpose of the organization of the corporation was the building up of the export trade in steel and iron which at that time was sporadic, the mere dumping of the products upon foreign markets.

Not monopoly, therefore, was the purpose of the organization of the corporation but concentration of efforts with resultant economies and benefits.

The tendency of the industry and the purpose of the corporation in yielding to it were expressed in comprehensive condensation by the word "integration," which signifies continuity in the processes of the industry from ore mines to the finished product.

All considerations deemed pertinent were expressed and their influence was attempted to be assigned and, while conceding that the Steel Corporation, after its formation in times of financial disturbance, entered into informal agreements or understandings with its competitors to maintain prices, they terminated with their occasions, and, as they had ceased to exist, the court was not justified in dissolving the corporation.

The other opinion (by Judge Woolley and concurred in by Judge Hunt, 223 Fed. Rep. 161) was in some particulars, in antithesis to Judge Buffington's. The view was expressed that neither the Steel Corporation nor the preceding combinations, which were in a sense its antetypes, had the justification of industrial conditions, nor were they or it impelled by the necessity for integration, or compelled to unite in comprehensive enterprise because such had become a condition of success under the new order of things. On the contrary, that the organizers of the corporation and the preceding companies had illegal purpose from the very beginning, and the corporation

became "a combination of combinations, by which, directly or indirectly, approximately 180 independent concerns were brought under one business control," which, measured by the amount of production, extended to 80% or 90% of the entire output of the country, and that its purpose was to secure great profits which were thought possible in the light of the history of its constituent combinations, and to accomplish permanently what those combinations had demonstrated could be accomplished temporarily, and thereby monopolize and restrain trade.[1]

---

[1] As bearing upon the power obtained and what the Corporation did we give other citations from Judge Woolley's opinion as follows:

"The ore reserves acquired by the corporation at and subsequent to its organization, the relation which such reserves bear to ore bodies then existing and subsequently discovered, and their bearing upon the question of monopoly of raw materials, are matters which have been discussed in the preceding opinion, and with the reasoning as well as with the conclusion that the corporation has not a monopoly of the raw materials of the steel industry, I am in entire accord."

"Further inquiring whether the corporation inherently possesses monopolistic power attention is next given to its proportion of the manufacture and sale of finished iron and steel products of the industry. Upon this subject there is a great volume of testimony, a detailed consideration of which in an opinion would be quite inexcusable. As a last analysis of this testimony, it is sufficient to say it shows that, large as was the corporation, and substantial as was its proportion of the business of the industry, the corporation was not able in the first ten years of its history to maintain its position in the increase of trade. During that period, its proportion of the domestic business decreased from 50.1 per cent. to 40.9 per cent. and its increase of business during that period was but 40.6 per cent. of its original volume. Its increase of business, measured by percentage, was exceeded by eight of its competitors, whose increase of business, likewise measured by percentage, ranged from 63 to 3779. This disparity in the increase of production indicates that the power of the corporation is not commensurate with its size, and that the size and the consequent power of the corporation are not sufficient to retard prosperous growth of efficient competitors.

"From the vast amount of testimony, it is conclusively shown that the Steel Corporation did not attempt to exert a power, if such it

The organizers, however (we are still representing the opinion), underestimated the opposing conditions and at the very beginning the Corporation instead of relying upon its own power sought and obtained the assistance and the coöperation of its competitors (the independent companies). In other words the view was expressed that the testimony did "not show that the corporation in and of itself ever possessed or exerted sufficient power when acting alone to control prices of the products of the industry." Its power was efficient only when in coöperation with its competitors, and hence it concerted with them in the expedients of pools, associations, trade meetings, and finally in a system of dinners inaugurated in 1907 by the president of the company, E. H. Gary, and called "the Gary Dinners." The dinners were congregations of producers and "were nothing but trade meetings," successors of the other means of associated action and control through such action. They were instituted first in "stress of panic," but, their potency being demonstrated, they were afterwards called to control prices "in periods of industrial calm." "They were pools without penalties" and more efficient in stabilizing prices. But it was the further declaration that "when joint action was either refused or withdrawn the Corporation's prices were controlled by competition."

The Corporation, it was said, did not at any time abuse the power or ascendency it possessed. It resorted to none of the brutalities or tyrannies that the cases illustrate of

---

possessed, to oppress and destroy its competitors, and it is likewise disclosed by the history of the industry subsequent to the organization of the corporation that if it had made such an attempt it would have failed. It is also shown by the testimony that, acting independently and relying alone upon its power and wealth, great as they were, the corporation has never been able to dominate the steel industry by controlling the supply of raw materials, restraining production of finished products, or enhancing and maintaining the prices of either."

other combinations. It did not secure freight rebates; it did not increase its profits by reducing the wages of its employees—whatever it did was not at the expense of labor; it did not increase its profits by lowering the quality of its products, nor create an artificial scarcity of them; it did not oppress or coerce its competitors—its competition, though vigorous, was fair; it did not undersell its competitors in some localities by reducing its prices there below those maintained elsewhere, or require its customers to enter into contracts limiting their purchases or restricting them in resale prices; it did not obtain customers by secret rebates or departures from its published prices; there was no evidence that it attempted to crush its competitors or drive them out of the market, nor did it take customers from its competitors by unfair means, and in its competition it seemed to make no difference between large and small competitors. Indeed it is said in many ways and illustrated that "instead of relying upon its own power to fix and maintain prices, the corporation, at its very beginning sought and obtained the assistance of others." It combined its power with that of its competitors. It did not have power in and of itself, and the control it exerted was only in and by association with its competitors. Its offense, therefore, such as it was, was not different from theirs and was distinguished from theirs "only in the leadership it assumed in promulgating and perfecting the policy." This leadership it gave up, and it had ceased to offend against the law before this suit was brought. It was hence concluded that it should be distinguished from its organizers and that their intent and unsuccessful attempt should not be attributed to it, that it "in and of itself is not now and has never been a monopoly or a combination in restraint of trade," and a decree of dissolution should not be entered against it.

This summary of the opinions, given necessarily in paraphrase, does not adequately represent their ability

and strength, but it has value as indicating the contentions of the parties, and the ultimate propositions to which the contentions are addressed. The opinions indicate that the evidence admits of different deductions as to the genesis of the Corporation and the purpose of its organizers, but only of a single deduction as to the power it attained and could exercise. Both opinions were clear and confident that the power of the Corporation never did and does not now reach to monopoly, and their review of the evidence, and our independent examination of it, enable us to elect between their respective estimates of it, and we concur in the main with that of Judges Woolley and Hunt. "And we add no comment except, it may be, that they underestimated the influence of the tendency and movement to integration, the appreciation of the necessity or value of the continuity of manufacture from the ore to the finished product. And there was such a tendency; and though it cannot be asserted it had become a necessity, it had certainly become a facility of industrial progress. There was, therefore, much to urge it and give incentive to conduct that could accomplish it. From the nature and properties of the industry, the processes of production were something more than the stage and setting of the human activities. They determined to an extent those activities, furnished their motives, and gave test of their quality—not, of course, that the activities could get any immunity from size, or resources, or energies, whether exerted in integrated plants or diversified ones.

The contentions of the case, therefore, must be judged by the requirements of the law, not by accidental or adventitious circumstances. But what are such circumstances? We have seen that it was the view of the District Court that size was such a circumstance and had no accusing or excusing influence. The contention of the Government is to the contrary. Its assertion is that the size of the Corporation being the result of a "combination

of powerful and able competitors" had become "substantially dominant" in the industry and illegal. And that this was determined. The companies combined, is the further assertion, had already reached a high degree of efficiency, and in their independence were factors in production and competition, but ceased to be such when brought under the regulating control of the Corporation, which by uniting them offended the law; and that the organizers of the Corporation "had in mind the specific purposes of the restraint of trade and the enormous profits resulting from that restraint."

It is the contention of the Corporation opposing those of the Government and denying the illegal purposes charged against it, that the industry demanded qualities and an enterprise that lesser industries do not demand and must have a corresponding latitude and facility. Indeed, it is insisted that the industry had practically, (to quote the words of Judge Buffington, he quoting those of a witness,) "reached the limit, or very nearly so, at which economies from a metallurgical or mechanical standpoint could be made effective," and "that instead, as was then the practice, of having one mill to make 10 or 20 or 50 products, the greatest economy would result from having one mill make one product, and make that product continuously." In other words, that there was a necessity for integration, and rescue from the old conditions—from their improvidence and waste of effort; and that, in redress of the conditions, the Corporation was formed, its purpose and effect being "salvage not monopoly," to quote the words of counsel. It was, is the insistence, the conception of ability, "a vision of a great business which should embrace all lines of steel and all processes of manufacture from the ore to the finished product and which by reason of the economies thus to be effected and the diversity of products it would be able to offer, could successfully compete in all the markets of the world."

It is urged further that to the discernment of that great possibility was added a courage that dared attempt its accomplishment, and the conception and the courage made the formation of the Corporation notable but did not make it illegal.

We state the contentions, we do not have to discuss them, or review the arguments advanced for their acceptance or repulsion. That is done in the opinions of the district judges, and we may well despair to supplement the force of their representation of the conditions antecedent to the formation of the Corporation and in what respect and extent its formation changed them. Of course in that representation and its details there is guidance to decision, but they must be rightly estimated to judge of what they persuade. Our present purpose is not retrospect for itself, however instructive, but practical decision upon existing conditions, that we may not by their disturbance produce, or even risk, consequences of a concern that cannot now be computed. In other words, our consideration should be of not what the Corporation had power to do or did, but what it has now power to do and is doing, and what judgment shall be now pronounced—whether its dissolution, as the Government prays, or the dismissal of the suit, as the Corporation insists?

The alternatives are perplexing—involve conflicting considerations, which, regarded in isolation, have diverse tendencies. We have seen that the judges of the District Court unanimously concurred in the view that the Corporation did not achieve monopoly, and such is our deduction, and it is against monopoly that the statute is directed, not against an expectation of it, but against its realization, and it is certain that it was not realized. The opposing conditions were underestimated. The power attained was much greater than that possessed by any one competitor—it was not greater than that possessed by all of them. Monopoly, therefore, was not achieved, and

competitors had to be persuaded by pools, associations, trade meetings, and through the social form of dinners, all of them, it may be, violations of the law, but transient in their purpose and effect. They were scattered through the years from 1901 (the year of the formation of the Corporation), until 1911, but, after instances of success and failure, were abandoned nine months before this suit was brought. There is no evidence that the abandonment was in prophecy of or dread of suit; and the illegal practices have not been resumed, nor is there any evidence of an intention to resume them, and certainly no "dangerous probability" of their resumption, the test for which *Swift & Co.* v. *United States*, 196 U. S. 375, 396, is cited. It is our conclusion, therefore, as it was that of the judges below, that the practices were abandoned from a conviction of their futility, from the operation of forces that were not understood or were underestimated, and the case is not peculiar. And we may say in passing that the Government cannot fear their resumption for it did not avail itself of the offer of the District Court to retain jurisdiction of the cause in order that if illegal acts should be attempted they could be restrained.

What then can now be urged against the Corporation? Can comparisons in other regards be made with its competitors and by such comparisons guilty or innocent existence be assigned it? It is greater in size and productive power than any of its competitors, equal or nearly equal to them all, but its power over prices was not and is not commensurate with its power to produce.

It is true there is some testimony tending to show that the Corporation had such power, but there was also testimony and a course of action tending strongly to the contrary. The conflict was by the judges of the District Court unanimously resolved against the existence of that power, and in doing so they but gave effect to the greater weight of the evidence. It is certain that no such power

was exerted. On the contrary, the only attempt at a fixation of prices was, as already said, through an appeal to and confederation with competitors, and the record shows besides that when competition occurred it was not in pretence, and the Corporation declined in productive powers—the competitors growing either against or in consequence of the competition. If against the competition we have an instance of movement against what the Government insists was an irresistible force; if in consequence of competition, we have an illustration of the adage that "competition is the life of trade" and is not easily repressed. The power of monopoly in the Corporation under either illustration is an untenable accusation.

We may pause here for a moment to notice illustrations of the Government of the purpose of the Corporation, instancing its acquisition after its formation of control over the Shelby Steel Tube Company, the Union Steel Company, and, subsequently, the Tennessee Company. There is dispute over the reasons for these acquisitions which we shall not detail. There is, however, an important circumstance in connection with that of the Tennessee Company which is worthy to be noted. It was submitted to President Roosevelt and he gave it his approval. His approval, of course, did not make it legal, but it gives assurance of its legality, and we know from his earnestness in the public welfare he would have approved of nothing that had even a tendency to its detriment. And he testified he was not deceived and that he believed that "the Tennessee Coal and Iron people had a property which was almost worthless in their hands, nearly worthless to them, nearly worthless to the communities in which it was situated, and entirely worthless to any financial institution that had the securities the minute that any panic came, and that the only way to give value to it was to put it in the hands of people whose possession of it

95009 O—58—pt. 4——3

would be a guarantee that there was value to it." Such being the emergency it seems like an extreme accusation to say that the Corporation which relieved it, and, perhaps, rescued the company and the communities dependent upon it from disaster, was urged by unworthy motives. Did illegality attach afterwards and how? And what was the Corporation to do with the property? Let it decay in desuetude or develop its capabilities and resources? In the development, of course, there would be profit to the Corporation, but there would be profit as well to the world. For this reason President Roosevelt sanctioned the purchase, and it would seem a distempered view of purchase and result to regard them as violations of law.

From this digression we return to the consideration of the conduct of the Corporation towards its competitors. Besides the circumstances which we have mentioned there are others of probative strength. The company's officers and, as well, its competitors and customers, testified that its competition was genuine, direct and vigorous, and was reflected in prices and production. No practical witness was produced by the Government in opposition. Its contention is based on the size and asserted dominance of the Corporation—alleged power for evil, not the exertion of the power in evil. Or as counsel put it, "a combination may be illegal because of its purpose; it may be illegal because it acquires a dominating power, not as a result of normal growth and development, but as a result of a combination of competitors." Such composition and its resulting power constitute, in the view of the Government, the offence against the law, and yet it is admitted "no competitor came forward and said he had to accept the Steel Corporation's prices." But this absence of complaint counsel urge against the Corporation. Competitors, it is said, followed the Corporation's prices because they made money by the imitation. Indeed the imitation is urged as

an evidence of the Corporation's power. "Universal imitation," counsel assert, is "an evidence of power." In this concord of action, the contention is, there is the sinister dominance of the Corporation—"its extensive control of the industry is such that the others [independent companies] follow." Counsel, however, admit that there was "occasionally" some competition, but reject the suggestion that it extended practically to a war between the Corporation and the independents. Counsel say, "They [the Corporation is made a plural] called a few—they called 200 witnesses out of some forty thousand customers, and they expect with that customer evidence to overcome the whole train of price movement shown since the Corporation was formed." And "movement of prices" counsel explained "as shown by the published prices . . . they were the ones that the competitors were maintaining all during the interval."

It would seem that "200 witnesses" would be fairly representative. Besides the balance of the "forty thousand customers" was open to the Government to draw upon. Not having done so, is it not permissible to infer that none would testify to the existence of the influence that the Government asserts? At any rate, not one was called, but instead the opinion of an editor of a trade journal is adduced, and that of an author and teacher of economics whose philosophical deductions had, perhaps, fortification from experience as Deputy Commissioner of Corporations and as an employee in the Bureau of Corporations. His deduction was that when prices are constant through a definite period an artificial influence is indicated; if they vary during such a period it is a consequence of competitive conditions. It has become an aphorism that there is danger of deception in generalities, and in a case of this importance we should have something surer for judgment than speculation, something more than a deduction equivocal of itself even though the

facts it rests on or asserts were not contradicted. If the phenomena of production and prices were as easily resolved as the witness implied, much discussion and much literature have been wasted, and some of the problems that are now distracting the world would be given composing solution. Of course competition affects prices but it is only one among other influences and does not more than they, register itself in definite and legible effect.

We magnify the testimony by its consideration. Against it competitors, dealers and customers of the Corporation testify in multitude that no adventitious interference was employed to either fix or maintain prices and that they were constant or varied according to natural conditions. Can this testimony be minimized or dismissed by inferring that, as intimated, it is an evidence of power not of weakness; and power exerted not only to suppress competition but to compel testimony, is the necessary inference, shading into perjury to deny its exertion? The situation is indeed singular, and we may wonder at it, wonder that the despotism of the Corporation, so baneful to the world in the representation of the Government, did not produce protesting victims.

But there are other paradoxes. The Government does not hesitate to present contradictions, though only one can be true, such being we were told in our school books the "principle of contradiction." In one competitors (the independents) are represented as oppressed by the superior power of the Corporation; in the other they are represented as ascending to opulence by imitating that power's prices which they could not do if at disadvantage from the other conditions of competition; and yet confederated action is not asserted. If it were this suit would take on another cast. The competitors would cease to be the victims of the Corporation and would become its accomplices. And there is no other alternative. The sug-

gestion that lurks in the Government's contention that the acceptance of the Corporation's prices is the submission of impotence to irresistible power is, in view of the testimony of the competitors, untenable. They, as we have seen, deny restraint in any measure or illegal influence of any kind. The Government, therefore, is reduced to the assertion that the size of the Corporation, the power it may have, not the exertion of the power, is an abhorrence to the law, or as the Government says, "the combination embodied in the Corporation unduly restrains competition by its *necessary effect*, (the italics are the emphasis of the Government) and therefore is unlawful regardless of purpose." "A wrongful purpose," the Government adds, is "matter of aggravation." The illegality is statical, purpose or movement of any kind only its emphasis. To assent to that, to what extremes should we be led? Competition consists of business activities and ability—they make its life; but there may be fatalities in it. Are the activities to be encouraged when militant, and suppressed or regulated when triumphant because of the dominance attained? To such paternalism the Government's contention, which regards power rather than its use the determining consideration, seems to conduct. Certainly conducts we may say, for it is the inevitable logic of the Government's contention that competition must not only be free, but that it must not be pressed to the ascendency of a competitor, for in ascendency there is the menace of monopoly.

We have pointed out that there are several of the Government's contentions which are difficult to represent or measure, and, the one we are now considering, that is the power is "unlawful regardless of purpose," is another of them. It seems to us that it has for its ultimate principle and justification that strength in any producer or seller is a menace to the public interest and illegal because there is potency in it for mischief. The regression is extreme, but

short of it the Government cannot stop. The fallacy it conveys is manifest.

The Corporation was formed in 1901, no act of aggression upon its competitors is charged against it, it confederated with them at times in offence against the law, but abandoned that before this suit was brought, and since 1911 no act in violation of law can be established against it except its existence be such an act. This is urged, as we have seen, and that the interest of the public is involved, and that such interest is paramount to corporation or competitors. Granted—though it is difficult to see how there can be restraint of trade when there is no restraint of competitors in the trade nor complaints by customers—how can it be worked out of the situation and through what proposition of law? Of course it calls for nothing other than a right application of the law and to repeat what we have said above, shall we declare the law to be that size is an offence even though it minds its own business because what it does is imitated? The Corporation is undoubtedly of impressive size and it takes an effort of resolution not to be affected by it or to exaggerate its influence. But we must adhere to the law and the law does not make mere size an offence or the existence of unexerted power an offence. It, we repeat, requires overt acts and trusts to its prohibition of them and its power to repress or punish them. It does not compel competition nor require all that is possible.

Admitting, however, that there is pertinent strength in the propositions of the Government, and in connection with them, we recall the distinction we made in the *Standard Oil Case* (221 U. S. 1, 77) between acts done in violation of the statute and a condition brought about which "in and of itself, is not only a continued attempt to monopolize, but also a monopolization." In such case, we declared, "the duty to enforce the statute" required "the application of broader and more controlling" remedies

than in the other. And the remedies applied conformed to the declaration; there was prohibition of future acts and there was dissolution of "the combination found to exist in violation of the statute" in order to "neutralize the extension and continually operating force which the possession of the power unlawfully obtained" had "brought" and would "continue to bring about."

Are the case and its precepts applicable here? The Steel Corporation by its formation united under one control competing companies and thus, it is urged, a condition was brought about in violation of the statute, and therefore illegal and became a "continually operating force" with the "possession of power unlawfully obtained."

But there are countervailing considerations. We have seen whatever there was of wrong intent could not be executed, whatever there was of evil effect, was discontinued before this suit was brought; and this, we think, determines the decree. We say this in full realization of the requirements of the law. It is clear in its denunciation of monopolies and equally clear in its direction that the courts of the Nation shall prevent and restrain them (its language is "to prevent and restrain violations of" the act), but the command is necessarily submissive to the conditions which may exist and the usual powers of a court of equity to adapt its remedies to those conditions. In other words, it is not expected to enforce abstractions and do injury thereby, it may be, to the purpose of the law. It is this flexibility of discretion—indeed essential function—that makes its value in our jurisprudence—value in this case as in others. We do not mean to say that the law is not its own measure and that it can be disregarded, but only that the appropriate relief in each instance is remitted to a court of equity to determine, not, and let us be explicit in this, to advance a policy contrary to that of the law, but in submission to the law and its policy, and in execution of both. And it is certainly a

matter for consideration that there was no legal attack on the Corporation until 1911, ten years after its formation and the commencement of its career. We do not, however speak of the delay simply as to its time—that there is estoppel in it because of its time—but on account of what was done during that time—the many millions of dollars spent, the development made, and the enterprises undertaken, the investments by the public that have been invited and are not to be ignored. And what of the foreign trade that has been developed and exists? The Government, with some inconsistency, it seems to us, would remove this from the decree of dissolution. Indeed, it is pointed out that under congressional legislation in the Webb Act the foreign trade of the Corporation is reserved to it. And further, it is said, that the Corporation has constructed a company called the Products Company which can be "very easily preserved as a medium through which the steel business might reach the balance of the world," and that in the decree of "dissolution that could be provided." This is supplemented by the suggestion that not only the Steel Corporation, "but other steel makers of the country, could function through an instrumentality created under the Webb Act." [C. 50, § 2, 40 Stat. 516.]

The propositions and suggestions do not commend themselves. We do not see how the Steel Corporation can be such a beneficial instrumentality in the trade of the world and its beneficence be preserved, and yet be such an evil instrumentality in the trade of the United States that it must be destroyed. And by whom and how shall all the adjustments of preservation or destruction be made? How can the Corporation be sustained and its power of control over its subsidiary companies be retained and exercised in the foreign trade and given up in the domestic trade? The Government presents no solution of the problem. Counsel realize the difficulty and seem to think that its solution or its evasion is in the suggestion

that the Steel Corporation and "other steel makers could function through an instrumentality created under the Webb Act." But we are confronted with the necessity of immediate judicial action under existing laws, not action under conceptions which may never be capable of legal execution. We must now decide and we see no guide to decision in the propositions of the Government.

The Government, however, tentatively presents a proposition which has some tangibility. It submits that certain of the subsidiary companies are so mechanically equipped and so officially directed as to be released and remitted to independent action and individual interests and the competition to which such interests prompt, without any disturbance to business. The companies are enumerated. They are the Carnegie Steel Company (a combination of the old Carnegie Company, the National Steel Company, and the American Steel Company), the Federal Steel Company, the Tennessee Company and the Union Steel Company (a combination of the Union Steel Company of Donora, Pa., Sharon Steel Company of Sharon, Pa., and Sharon Tin Plate Company). They are fully integrated, it is said, possess their own supplies, facilities of transportation and distribution. They are subject only to the Steel Corporation is, in effect, the declaration, in nothing but its control of their prices. We may say parenthetically that they are defendants in the suit and charged as offenders, and we have the strange circumstance of violators of the law being urged to be used as expedients of the law.

But let us see what guide to a procedure of dissolution of the Corporation and the dispersion as well of its subsidiary companies, for they are asserted to be illegal combinations, is prayed. And the fact must not be overlooked or underestimated. The prayer of the Government calls for not only a disruption of present conditions but the restoration of the conditions of twenty years ago, if

not literally, substantially. Is there guidance to this in the *Standard Oil Case* and the *Tobacco Case* [221 U. S. 1, 106]? As an element in determining the answer we shall have to compare the cases with that at bar, but this can only be done in a general way. And the law necessarily must be kept in mind. No other comment of it is necessary. It has received so much exposition that it and all it prescribes and proscribes should be considered as a consciously directing presence.

The Standard Oil Company had its origin in 1882 and through successive forms of combinations and agencies it progressed in illegal power to the day of the decree, even attempting to circumvent by one of its forms the decision of a court against it. And its methods in using its power was of the kind that Judge Woolley described as "brutal," and of which practices, he said, the Steel Corporation was absolutely guiltless. We have enumerated them and this reference to them is enough. And of the practices this court said no disinterested mind could doubt that the purpose was "to drive others from the field and to exclude them from their right to trade and thus accomplish the mastery which was the end in view." It was further said that what was done and the final culmination "in the plan of the New Jersey corporation" made "manifest the continued existence of the intent . . . and . . . impelled the expansion of the New Jersey corporation." It was to this corporation, which represented the power and purpose of all that preceded, that the suit was addressed and the decree of the court was to apply. What we have quoted contrasts that case with this. The contrast is further emphasized by pointing out how in the case of the New Jersey corporation the original wrong was reflected in and manifested by the acts which followed the organization, as described by the court. It said: "The exercise of the power which resulted from that organization fortifies the foregoing conclusions [as to monopoly, etc.], since the

development which came, the acquisition here and there which ensued of every efficient means by which competition could have been asserted, the slow but resistless methods which followed by which means of transportation were absorbed and brought under control, the system of marketing which was adopted by which the country was divided into districts and the trade in each district in oil was turned over to a designated corporation within the combination and all others were excluded, all lead the mind up to a conviction of a purpose and intent which we think is so certain as practically to cause the subject not to be within the domain of reasonable contention."

The *Tobacco Case* has the same bad distinctions as the *Standard Oil Case*. The illegality in which it was formed (there were two American Tobacco Companies, but we use the name as designating the new company as representing the combinations of the suit) continued, indeed progressed in intensity and defiance to the moment of decree. And it is the intimation of the opinion if not its direct assertion that the formation of the company (the word "combination" is used) was preceded by the intimidation of a trade war "inspired by one or more of the minds which brought about and became parties to that combination." In other words the purpose of the combination was signalled to competitors and the choice presented to them was submission or ruin, to become parties to the illegal enterprise or be driven "out of the business." This was the purpose and the achievement, and the processes by which achieved this court enumerated to be the formation of new companies, taking stock in others to obscure the result actually attained, but always to monopolize and retain power in the hands of the few and mastery of the trade; putting control in the hands of seemingly independent corporations as barriers to the entry of others into the trade; the expenditure of millions upon millions in buying out plants not to utilize them but to close them; by con-

stantly recurring stipulations by which numbers of persons, whether manufacturers, stockholders or employees, were required to bind themselves, generally for long periods, not to compete in the future. In the *Tobacco Case*, therefore, as in the *Standard Oil Case*, the court had to deal with a persistent and systematic lawbreaker masquerading under legal forms, and which not only had to be stripped of its disguises but arrested in its illegality. A decree of dissolution was the manifest instrumentality and inevitable. We think it would be a work of sheer supererogation to point out that a decree in that case or in the *Standard Oil Case* furnishes no example for a decree in this.

In conclusion we are unable to see that the public interest will be served by yielding to the contention of the Government respecting the dissolution of the company or the separation from it of some of its subsidiaries; and we do see in a contrary conclusion a risk of injury to the public interest, including a material disturbance of, and, it may be serious detriment to, the foreign trade. And in submission to the policy of the law and its fortifying prohibitions the public interest is of paramount regard.

We think, therefore, that the decree of the District Court should be affirmed.

So ordered.

MR. JUSTICE MCREYNOLDS and MR. JUSTICE BRANDEIS took no part in the consideration or decision of the case.

MR. JUSTICE DAY dissenting.

This record seems to me to leave no fair room for a doubt that the defendants, the United States Steel Corporation and the several subsidiary corporations which make up that organization, were formed in violation of the Sherman Act. I am unable to accept the conclusion

which directs a dismissal of the bill instead of following the well-settled practice, sanctioned by previous decisions of this court, requiring the dissolution of combinations made in direct violation of the law.

It appears to be thoroughly established that the formation of the corporations, here under consideration, constituted combinations between competitors, in violation of law, and intended to remove competition and to directly restrain trade. I agree with the conclusions of Judges Woolley and Hunt, expressed in the court below (223 Fed. Rep. 161, *et seq.*), that the combinations were not submissions to business conditions but were designed to control them for illegal purposes, regardless of other consequences, and "were made upon a scale that was huge and in a manner that was wild," and "properties were assembled and combined with less regard to their importance as integral parts of an integrated whole than to the advantages expected from the elimination of the competition which theretofore existed between them." Those judges found that the constituent companies of the United States Steel Corporation, nine in number, were themselves combinations of steel manufacturers, and the effect of the organization of these combinations was to give a control over the industry at least equal to that theretofore possessed by the constituent companies and their subsidiaries; that the Steel Corporation was a combination of combinations by which directly or indirectly 180 independent concerns were brought under one control, and in the language of Judge Woolley (p. 167):

"Without referring to the great mass of figures which bears upon this aspect of the case, it is clear to me that combinations were created by acquiring competing producing concerns at figures not based upon their physical or their business values, as independent and separate producers, but upon their values in combination; that is, upon their values as manufacturing plants and business

concerns with competition eliminated. In many instances capital stock was issued for amounts vastly in excess of the values of the properties purchased, thereby capitalizing the anticipated fruits of combination. The control acquired over the branches of the industry to which the combinations particularly related, measured by the amount of production, extended in some instances from 80 per cent. to 95 per cent. of the entire output of the country, resulting in the immediate increase in prices, in some cases double and in others treble what they were before, yielding large dividends upon greatly inflated capital.

"The immediate, as well as the normal effect of such combinations, was in all instances a complete elimination of competition between the concerns absorbed, and a corresponding restraint of trade."

The enormous overcapitalization of companies and the appropriation of $100,000,000 in stock to promotion expenses were represented in the stock issues of the new organizations thus formed, and were the basis upon which large dividends have been declared from the profits of the business. This record shows that the power obtained by the corporation brought under its control large competing companies which were of themselves illegal combinations, and succeeded to their power; that some of the organizers of the Steel Corporation were parties to the preceding combinations, participated in their illegality, and by uniting them under a common direction intended to augment and perpetuate their power. It is the irresistible conclusion from these premises that great profits to be derived from unified control were the object of these organizations.

The contention must be rejected that the combination was an inevitable evolution of industrial tendencies compelling union of endeavor. Nothing could add to the vivid accuracy with which Judge Woolley, speaking for himself

and Judge Hunt, has stated the illegality of the organization, and its purpose to combine in one great corporation the previous combinations by a direct violation of the purposes and terms of the Sherman Act.

For many years, as the record discloses, this unlawful organization exerted its power to control and maintain prices by pools, associations, trade meetings, and as the result of discussion and agreements at the so-called "Gary Dinners," where the assembled trade opponents secured coöperation and joint action through the machinery of special committees of competing concerns, and by prudent prevision took into account the possibility of defection, and the means of controlling and perpetuating that industrial harmony which arose from the control and maintenance of prices.

It inevitably follows that the corporation violated the law in its formation and by its immediate practices. The power, thus obtained from the combination of resources almost unlimited in the aggregation of competing organizations, had within its control the domination of the trade, and the ability to fix prices and restrain the free flow of commerce upon a scale heretofore unapproached in the history of corporate organization in this country.

These facts established, as it seems to me they are by the record, it follows that, if the Sherman Act is to be given efficacy, there must be a decree undoing so far as is possible that which has been achieved in open, notorious, and continued violation of its provisions.

I agree that the act offers no objection to the mere size of a corporation, nor to the continued exertion of its lawful power, when that size and power have been obtained by lawful means and developed by natural growth, although its resources, capital and strength may give to such corporation a dominating place in the business and industry with which it is concerned. It is entitled to maintain its size and the power that legitimately goes with it, pro-

vided no law has been transgressed in obtaining it. But I understand the reiterated decisions of this court construing the Sherman Act to hold that this power may not legally be derived from conspiracies, combinations, or contracts in restraint of trade. To permit this would be to practically annul the Sherman Law by judicial decree. This principle has been so often declared by the decisions that it is only necessary to refer to some of them. It is the scope of such combinations, and their power to suppress and stifle competition and create or tend to create monopolies, which, as we have declared so often as to make its reiteration monotonous, it was the purpose of the Sherman Act to condemn, including all combinations and conspiracies to restrain the free and natural flow of trade in the channels of interstate commerce. *Pearsall* v. *Great Northern Ry. Co.*, 161 U. S. 646, 676, 677; *Trans-Missouri Freight Assn. Case*, 166 U. S. 290, 324; *Northern Securities Case*, 193 U. S. 197; *Addyston Pipe Co.* v. *United States*, 175 U. S. 211, 238; *Harriman* v. *Northern Securities Co.*, 197 U. S. 244, 291; *Union Pacific Case*, 226 U. S. 61, 88. While it was not the purpose of the act to condemn normal and usual contracts to lawfully expand business and further legitimate trade, it did intend to effectively reach and control all conspiracies and combinations or contracts of whatever form which unduly restrain competition and unduly obstruct the natural course of trade, or which from their nature, or effect, have proved effectual to restrain interstate commerce. *Standard Oil Co.* v. *United States*, 221 U. S. 1; *United States* v. *American Tobacco Co.*, 221 U. S. 106; *United States* v. *Reading Co.*, 226 U. S. 324; *Straus* v. *American Publishers' Assn.*, 231 U. S. 222; *Eastern States Retail Lumber Dealers' Assn.* v. *United States*, 234 U. S. 600.

This statute has been in force for nearly thirty years. It has been frequently before this court for consideration, and the nature and character of the relief to be granted

against combinations found guilty of violations of it have been the subject of much consideration. Its interpretation has become a part of the law itself, and, if changes are to be made now in its construction or operation, it seems to me that the exertion of such authority rests with Congress and not with the courts.

The fourth section is intended to give to courts of equity of the United States the power to effectively control and restrain violations of the act. In none of the cases which have been before the courts was the character of the relief to be granted, where organizations were found to be within the condemnation of the act, more thoroughly considered than in the *Standard Oil* and *Tobacco Company Cases*, reported in 221 U. S. In the former case, considering the measure of relief to be granted in the case of a combination, certainly not more obnoxious to the Sherman Act than the court now finds the one under consideration to be, this court declared that it must be twofold in character (221 U. S. 78): "1st. To forbid the doing in the future of acts like those which we have found to have been done in the past which would be violative of the statute. 2d. The exertion of such measure of relief as will effectually dissolve the combination found to exist in violation of the statute, and thus neutralize the extension and continually operating force which the possession of the power unlawfully obtained has brought and will continue to bring about."

In the *American Tobacco Company Case* the nature of the relief to be granted was again given consideration, and it was there concluded that the only effectual remedy was to dissolve the combination and the companies comprising it, and for that purpose the cause was remanded to the District Court to hear the parties and determine a method of dissolution and of recreating from the elements composing it "a new condition which shall be honestly in harmony with and not repugnant to the law." In that

95009 O—58—pt. 4——4

case the corporations dissolved had long been in existence, and the offending companies were organized years before the suit was brought and before the decree of dissolution was finally made. Such facts were considered no valid objection to the dissolution of these powerful organizations as the only effective means of enforcing the purposes of the Sherman Anti-Trust Act. These cases have been frequently followed in this court, and in the lower federal courts, in determining the nature of the relief to be granted, and I see no occasion to depart from them now.

As I understand the conclusions of the court, affirming the decree directing dismissal of the bill, they amount to this: that these combinations, both the holding company and the subsidiaries which comprise it, although organized in plain violation and bold defiance of the provisions of the act, nevertheless are immune from a decree effectually ending the combinations and putting it out of their power to attain the unlawful purposes sought, because of some reasons of public policy requiring such conclusion. I know of no public policy which sanctions a violation of the law, nor of any inconvenience to trade, domestic or foreign, which should have the effect of placing combinations, which have been able thus to organize one of the greatest industries of the country in defiance of law, in an impregnable position above the control of the law forbidding such combinations. Such a conclusion does violence to the policy which the law was intended to enforce, runs counter to the decisions of the court, and necessarily results in a practical nullification of the act itself.

There is no mistaking the terms of the act as they have hitherto been interpreted by this court. It was not intended to merely suppress unfair practices, but, as its history and terms amply show, it was intended to make it criminal to form combinations or engage in conspiracies or contracts in restraint of interstate trade. The remedy by injunction, at the instance of the Attorney General, was

given for the purpose of enabling the courts, as the statute states, to prohibit such conspiracies, combinations and contracts, and this court interpreting its provisions has held that the proper enforcement of the act requires decrees to end combinations by dissolving them and restoring as far as possible the competitive conditions which the combinations have destroyed. I am unable to see force in the suggestion that public policy, or the assumed disastrous effect upon foreign trade of dissolving the unlawful combination, is sufficient to entitle it to immunity from the enforcement of the statute.

Nor can I yield assent to the proposition that this combination has not acquired a dominant position in the trade which enables it to control prices and production when it sees fit to exert its power. Its total assets on December 31, 1913, were in excess of $1,800,000,000; its outstanding capital stock was $868,583,600; its surplus $151,798,428. Its cash on hand ordinarily was $75,000,000; this sum alone exceeded the total capitalization of any of its competitors, and with a single exception, the total capitalization and surplus of any one of them. That such an organization thus fortified and equipped could if it saw fit dominate the trade and control competition would seem to be a business proposition too plain to require extended argument to support it. Its resources, strength and comprehensive ownership of the means of production enable it to adopt measures to do again as it has done in the past, that is, to effectually dominate and control the steel business of the country. From the earliest decisions of this court it has been declared that it was the effective power of such organizations to control and restrain competition and the freedom of trade that Congress intended to limit and control. That the exercise of the power may be withheld, or exerted with forbearing benevolence, does not place such combinations beyond the authority of the statute which was intended to prohibit their formation,

and when formed to deprive them of the power unlawfully attained.

It is said that a complete monopolization of the steel business was never attained by the offending combinations. To insist upon such result would be beyond the requirements of the statute and in most cases practicably impossible. As we said in dealing with the Packers' combination in *Swift & Co.* v. *United States*, 196 U. S. 375, 396: "Where acts are not sufficient in themselves to produce a result which the law seeks to prevent—for instance, the monopoly—but require further acts in addition to the mere forces of nature to bring that result to pass, an intent to bring it to pass is necessary in order to produce a dangerous probability that it will happen. *Commonwealth* v. *Peaslee*, 177 Massachusetts, 267, 272. But when that intent and the consequent dangerous probability exist, this statute [Sherman Act], like many others and like the common law in some cases, directs itself against that dangerous probability as well as against the completed result."

It is affirmed that to grant the Government's request for a remand to the District Court for a decree of dissolution would not result in a change in the conditions of the steel trade. Such is not the theory of the Sherman Act. That act was framed in the belief that attempted or accomplished monopolization, or combinations which suppress free competition, were hurtful to the public interest, and that a restoration of competitive conditions would benefit the public. We have here a combination in control of one-half of the steel business of the country. If the plan were followed, as in the *American Tobacco Case*, of remanding the case to the District Court, a decree might be framed restoring competitive conditions as far as practicable. See *United States* v. *American Tobacco Co.*, 191 Fed. Rep. 371. In that case the subject of reconstruction so as to restore such conditions was elaborated and care-

fully considered. In my judgment the principles there laid down if followed now would make a very material difference in the steel industry. Instead of one dominating corporation, with scattered competitors, there would be competitive conditions throughout the whole trade which would carry into effect the policy of the law.

It seems to me that if this act is to be given effect, the bill, under the findings of fact made by the court, should not be dismissed, and the cause should be remanded to the District Court, where a plan of effective and final dissolution of the corporations should be enforced by a decree framed for that purpose.

MR. JUSTICE PITNEY and MR. JUSTICE CLARKE concur in this dissent.

IN THE MATTER OF

UNITED STATES STEEL CORPORATION ET AL.

COMPLAINT, FINDINGS AND ORDER IN REGARD TO THE ALLEGED VIOLATION OF SECTION 2 OF AN ACT OF CONGRESS APPROVED OCTOBER 15, 1914, AND OF SECTION 5 OF AN ACT OF CONGRESS APPROVED SEPTEMBER 26, 1914.

Docket 760—July 21, 1924.

SYLLABUS.

Where a corporation and its subsidiaries, which (1) were engaged in the production, manufacture, and sale of steel, and various products made therefrom, (2) together owned and operated iron ore mines and limestone quarries, and railroad and steamship lines serving some or all of their 125 plants located in 15 different states, and (3) produced about 50 per cent of the total rolled steel production in the United States, and did an annual business aggregating approximately one and one-half billion dollars;

(a) Adopted as a basis for price fixing activities and for the purpose of arriving at uniform delivered prices at any given point, a plan or system of selling their products universally at delivered prices and subject to their routing and making the basis of such prices for their rolled steel products, in the case of mills located at points other than Pittsburgh, the price of such a product at Pittsburgh plus an amount, equivalent to what the freight on the product would be if actually shipped from Pittsburgh to customer's destination;

With the result that—

There was discrimination between customers of the same mill outside of Pittsburgh, and between customers purchasing from a mill in Pittsburgh, and one not there located; and customer steel users against whom the aforesaid system discriminated, were prevented from competing on an equality, or from competing at all, with their competitors in favor of whom such discriminations operated, and the competition of concerns who were customers of said corporation and subsidiaries in the purchase of steel, and competitors in the manufacture and sale of products therefrom, was substantially lessened;

The markets of eastern and northern steel users were artificially and abnormally extended and those of their western and southern competitors were similarly restricted, and extinguished; western and southern steel users were generally unable to sell their products in the territory of their aforesaid eastern and northern competitors, or even in parts of their own natural territory, in which in numerous cases said eastern competitors established warehouses and sales offices and competed on an equality with said western competitors, prevented by the aforesaid system of prices from competing in the territory of the former, as well as in large portions

of what would be their natural territory were said system eliminated; the business of western manufacturers could not grow to the extent of the business of eastern competitors, their costs of production were unfavorably affected, and they were severely handicapped in operating and maintaining their businesses; and competition of steel users located at a great number of points was substantially lessened, imperiled, and at times destroyed:

Competition among producers of steel as well as among users thereof, was substantially lessened, in that the system of delivered prices, arrived at as above set forth, and used by said corporation and subsidiaries, in conjunction with the employment by them and their competitors of uniform contract provisions, uniform extras and differentials, etc., was followed by competitors generally with their encouragement, leadership, and cooperation; with resulting restraint and elimination of price competition; in that under said system western mills with large surplus production and lower costs were forced to dispose of surplus material by either curtailing production or "dumping" said material in eastern territory or abroad at lower prices while keeping up prices in their own immediate or natural markets, instead of first lowering costs therein in order to hold and expand the same; and in that under said system said western mills were obliged to share their aforesaid markets with their eastern competitors;

The steel producing development and steel consumption of sections of the United States, excluding Pittsburgh, was retarded, and development of Pittsburgh mills was abnormally increased; millions of dollars were added each year to prices paid to steel users or consumers outside of Pittsburgh; steel consumption at such points was restrained due to the fact that prices at western and southern points with lower producing costs than those at Pittsburgh, and a great surplus production, nevertheless were higher; the public was eventually required to pay the higher prices yielded by such practices (amounting to the excess payment, for the imaginary freight upon which the system was based, in the case of private and public construction work and farm implements alone, of many millions of dollars) and to suffer the economic disadvantages involved in said system's artificial and abnormal restriction of, and effect on production and consumption; and said system of delivered prices, making imaginary freight from Pittsburgh to customer's destination determining, concealing discriminations, and permitting no free operation of the law of supply and demand, in and of itself restrained competition;

(*b*) Made the Pittsburgh price plus a differential of five dollars a ton, their price on certain products at southern mills; with the result that customers were very seriously handicapped, and their markets were artificially restricted; the modernizing of steel producing plants by competitors was retarded, and steel costs thereby kept at higher figures; competition of steel users and competition of customer competitors, was substantially lessened; and in general results were brought about similar to those above set forth:

Held, That such a system, substantially as described, constituted discrimination in price in violation of Section 2 of the Act of Congress approved October 15, 1914, and an unfair method of competition in violation of Section 5 of the Act of Congress approved September 26, 1914.

Mr. K. E. Steinhauer, in collaboration with *Mr. Eugene W. Burr* and *Mr. Baldwin B. Bane*, who, respectively, participated during the major portion and during a portion of the preparation and trial of the case, and also in collaboration with *Mr. Hugh E. White*, industrial traffic manager and traffic counsel, for the Commission.

Mr. Richard V. Lindabury, *Mr. Cordenio A. Severance*, *Mr. William W. Corlett*, *Mr. J. Edward Ashmead*, and *Mr. Arthur L. Mulling*, for United States Steel Corporation et al.

Mr. Charles P. Craig and *Mr. George H. Spear*, for joint committee of civic organizations of Duluth, Minn., *amicus curiae*.

Mr. H. G. Pickering, for States of Illinois, Iowa, Minnesota, and Wisconsin, *amici curiae*.

COMPLAINT.[1]

The Federal Trade Commission having reason to believe from a preliminary examination made by it, that the United States Steel Corporation, American Bridge Company, American Sheet & Tin Plate Company, Carnegie Steel Company, National Tube Company, American Steel & Wire Company, Illinois Steel Company, Minnesota Steel Company, Clairton Steel Company, Union Steel Company, The Lorain Steel Company and the Tennessee Coal, Iron & Railroad Company, all of which are hereinafter referred to as the respondents, have been and are discriminating in price while engaged in interstate commerce, between the purchasers of its commodities, as hereinafter more particularly set forth, in violation of the provisions of Section 2 of an Act of Congress approved October 15, 1914, entitled "An Act to supplement existing laws against unlawful restraints, and monopolies, and for other purposes"; and that said respondents have been and are using unfair methods of competition in interstate commerce, as hereinafter more particularly set forth, in violation of the provisions of Section 5 of an Act of Congress approved September 26, 1914, entitled "An Act to create a Federal Trade Commission, to define its powers and duties, and for other purposes"; and it having appeared to the Commission that a proceeding by it in respect thereof would be to the interest of the public, issues this amended complaint, stating its charges in that respect on information and belief as follows:

Charge I.

PARAGRAPH 1. That the respondent, United States Steel Corporation, is a corporation organized and existing under and by virtue of the laws of the State of New Jersey, with its principal offices in the City of New York, State of New York; that said corporation

[1]As amended March 4, 1922, and, by stipulation, July 18, 1924.

acts as and is the holding corporation of and owns all, or substantially all, of the capital stock of numerous other corporations engaged in the business of producing, manufacturing and selling steel and various products made therefrom, including the following named and described respondent corporations hereinafter referred to as its subsidiaries, to wit:

American Bridge Company—a New Jersey corporation engaged directly and through controlled corporations in the manufacture and sale of rolled and fabricated steel for, and in the erection and construction of bridges, buildings and like structures;

American Sheet & Tin Plate Company—a New Jersey corporation engaged directly and through controlled corporations and leased plants in the manufacture and sale of rolled steel and steel sheets and plates and products made therefrom;

Carnegie Steel Company—a New Jersey corporation engaged directly and through controlled corporations and leased plants in the production, manufacture and sale of rolled steel and products made therefrom;

National Tube Company—a New Jersey corporation engaged directly and through controlled corporations in the manufacture and sale of rolled steel and steel pipes, tubes and products made therefrom;

American Steel & Wire Company—a New Jersey corporation engaged directly and through controlled corporations and leased plants in the manufacture and sale of rolled steel and steel wire rods, and products made therefrom;

Illinois Steel Company—an Illinois corporation engaged directly and through controlled corporations in the manufacture and sale of rolled steel and products made therefrom, including fabricated steel for bridges, buildings and like structures;

Minnesota Steel Company—a Minnesota corporation engaged directly and through controlled corporations in the production, manufacture and sale of rolled steel and products made therefrom;

Clairton Steel Company—a Pennsylvania corporation engaged through the said Carnegie Steel Company, its lessor, in the production, manufacture and sale of rolled steel and products made therefrom;

Union Steel Company—a Pennsylvania corporation engaged through the said Carnegie Steel Company, American Sheet & Tin Plate Company and American Steel & Wire Company, its lessors, in the production, manufacture and sale of rolled steel and products made therefrom;

The Lorain Steel Company—a Pennsylvania corporation engaged directly and through controlled corporations in the production. manufacture and sale of rolled steel and products made therefrom;

Tennessee Coal, Iron & Railroad Company—a Tennessee corporation engaged directly and through controlled corporations in the production, manufacture and sale of rolled steel and products made therefrom, including fabricated steel for bridges, buildings and like structures.

That said respondents own and control the iron ore mines and limestone quarries, which supply all of their ore and limestone requirements, and the railroad and steamship lines which transport the same from the mines to numerous of their plants, and the coal mines which supply the major portion of their coal requirements, and 125 plants for the manufacture of their steel and steel products, located in 15 States of the United States; that said respondents produce from 40 per cent to 60 per cent of the total production of each rolled steel product produced in the United States and do an annual business aggregating approximately one and one-half billion dollars; that the book value of the capital stock of said respondent, United States Steel Corporation, aggregates over one and one-half billion dollars, and said respondents' undivided surplus aggregates over one-half billion dollars.

PAR. 2. That the United States Steel Corporation, by virtue of its said ownership and control of all, or substantially all, of the capital stock of the foregoing mentioned respondent subsidiaries, exercises general control, supervision, direction and guidance over the policies of and business conducted by its said respondent and subsidiaries.

PAR. 3. That in the course of the said business conducted by said respondent subsidiaries and by said respondent, United States Steel Corporation, through its said respondent subsidiaries, as aforesaid, they transport the materials which they use in the manufacture of steel and the products made therefrom, from the States from which the same are taken, through and into other States in which said steel and the products made therefrom are manufactured, and they continually sell and transport from time to time their said steel and the products made therefrom, from the several States of the United States to the purchasers thereof in other States and in the Territories of the United States and in the District of Columbia, and in foreign countries, in direct competition with persons, partnerships and other corporations similarly engaged; that said purchasers, hereinafter sometimes referred to as "consumers," in the course

of their business in using, consuming and reselling said steel, continually sell and transport the same or the products which they make therefrom, from the several States of the United States to their customers in other States and in the Territories of the United States and in the District of Columbia, in direct competition with persons, partnerships and corporations similarly engaged.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid, have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their billets, a rolled steel product manufactured by said respondents, which they sell to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. Said rolled steel product is hereinafter referred to as "said steel" or "said rolled steel."

PAR. 5. (*a*) That for said rolled steel which any of said respondents manufacture in the city of Pittsburgh, Pa., they charge the purchasers or consumers thereof a price f. o. b. Pittsburgh, which is hereinafter referred to as the "Pittsburgh base" price or "Pittsburgh" price.

(*b*) That for said rolled steel which any of said respondents manufacture *outside* of the city of Pittsburgh (except where the same is manufactured in or near the city limits of Birmingham, Ala., as hereinafter mentioned), and which they sell to consumers outside of said city of Pittsburgh, they charge such consumers a different price than the said Pittsburgh base price, namely, a sum equivalent to said Pittsburgh base price *plus* the railroad rate of freight on said steel from Pittsburgh to the destination thereof, which different price is hereinafter referred to as the "Pittsburgh Plus" price; that said freight charges from Pittsburgh on said steel is purely a fictitious one for said steel is not shipped from Pittsburgh and no such charge is incurred; respondents pay only the freight charge incurred, *if any*, on said steel from the plant of its actual manufacture to its destination but collect from said consumers the fictitious freight charge from Pittsburgh. With respondents' Pittsburgh base price on said steel in Pittsburgh at $30 per ton, their price at Duluth, Minn., for said steel *manufactured* and *delivered* in Duluth is their Pittsburgh plus price of $43.20, the added $13.20 being the fictitious freight charge extorted by respondents over and above their Pittsburgh price. They pay no freight charge whatsoever in such case. With respondents' Pittsburgh price at $30 per ton, their Pittsburgh

plus price for said steel manufactured in Chicago and delivered to LaPorte, Ind., is $7.10 per ton additional—the fictitious Pittsburgh to LaPorte freight charge—while the only freight charge incurred by them is in transporting said steel from Chicago to LaPorte, or $3.80 per ton; the difference of $3.30 per ton is the amount extorted by respondents over and above their Pittsburgh price. *Every consumer outside of Pittsburgh is subjected to said discrimination, and the further away his consuming plant is from Pittsburgh, the greater is the discrimination against him.*

(*c*) That for said steel which said respondents, manufacture in or near the city limits of Birmingham, Ala., they charge the purchasers thereof a different price than either the said Pittsburgh base price of the said Pittsburgh plus price, namely, a sum equivalent to said Pittsburgh base price *plus* an arbitrary, so-called differential of $5 per ton, which price is their price f. o. b. Birmingham, and is hereinafter referred to as the "Birmingham price"; that prior to the late general increase in railroad freight rates, the said differential was $3 per ton, which was advanced to said $5 per ton simultaneously with and because of said increase in freight rates, notwithstanding the fact that said differential has no connection whatever with freight charges incurred or paid by said respondents.

PAR. 6. That the said discriminations in price made and being made by said respondents between purchasers of their said steel in the course of their interstate business, as aforesaid, were not and are not made on account of any difference in the grade, quality or quantity of the product so sold, nor were or are said discriminations such as make only due allowance for differences in the cost of selling or transportation of said steel, nor were or are such discriminations in price in the same or different communities made in good faith to meet competition.

PAR. 7. That the effects, among others, of said discriminations in price by respondents among the different purchasers of their said steel in the course of their interstate business as aforesaid, may be and are as follows:

(*a*) To substantially lessen competition of western and southern consumers generally of the United States, with the eastern consumers of said steel generally and Pittsburgh consumers thereof particularly, for the reason that said western and southern consumers, in attempting to compete in the East and North, respectively, are handicapped and frequently eliminated because of the discriminatory prices which they must pay for the said steel; when the Pittsburgh base price is $30 per ton, the Duluth consumer selling

his manufactured article in Pittsburgh, must pay for the said steel therein as follows:

	Per ton.
Pittsburgh base price	$30.00
Fictitious Pittsburgh to Duluth freight charge on said rolled steel	13.20
Actual freight charge on said steel in his manufactured article, Duluth to Pittsburgh	13.30
Total cost to Duluth consumers selling in Pittsburgh	56.50
And the Pittsburgh consumer selling his manufactured article in Pittsburgh, pays only	30.00
Disadvantage of Duluth consumer selling in Pittsburgh	26.50

On the other hand, when the said eastern consumers compete with their western competitors in the west, the disadvantage of their eastern location because of freight charges incurred in shipping west is *entirely eliminated*. When the Pittsburgh consumer selling his manufactured article in Duluth, pays for said steel therein, the following:

	Per ton.
Pittsburgh base price	$30.00
Actual freight charge on the steel in his manufactured article, Pittsburgh to Duluth	13.20
Total cost to Pittsburgh consumer selling in Duluth	43.20
And the Duluth consumer selling in Duluth pays:	
Pittsburgh base price	30.00
Fictitious Pittsburgh to Duluth freight charge	13.20
Total cost to Duluth consumer selling in Duluth	43.20
Disadvantage of Pittsburgh consumer selling in Duluth	None.

When the Pittsburgh base price is $30 per ton, the Chicago consumer selling his manfactured article at a halfway point between Chicago and Pittsburgh, must pay for the said steel therein, the following:

	Per ton.
Pittsburgh base price	$30.00
Fictitious freight charge	7.60
Actual freight charge, Chicago to said halfway point	6.00
Total cost to Chicago consumer	43.60

And the Pittsburgh consumer pays:

Pittsburgh base price	$30.00	
Actual freight charge Pittsburgh to said halfway point	6.00	
		36.00
Disadvantage of Chicago consumer in competing with Pittsburgh consumer at *halfway point between said cities*		7.60

The said competition of the western and southern consumers with said eastern consumers generally, and said Pittsburgh consumers particularly, is further lessened each time the railroad freight rate on said steel is increased, for in such case respondents' said discriminatory prices are likewise increased, while their Pittsburgh price remains unchanged; the discrimination against said western and southern consumers is thereby increased. On the other hand, the competition of the said eastern consumers generally, and said Pittsburgh consumers particularly, with said western consumers in the West and said southern consumers in the South, is not affected in the slightest degree by such increase in railroad freight rates. In 1918 the Pittsburgh to Duluth freight rate on said steel was only $6.58 per ton, so that the respondents' extorted from the Duluth consumer at that time only $6.58 per ton over their Pittsburgh price. To-day the said freight rate is $13.20 per ton, and respondents' said extortion now amounts to, and the Duluth consumers' disadvantage now is, $13.20 per ton, or over 100 per cent greater than in 1918.

(*b*) To substantially lessen competition with such *respondents* as are competitors of said consumers of said steel product and which are charged only the Pittsburgh base price therefor, while said consumers are compelled to pay the said higher and discriminatory prices therefor.

(*c*) To substantially lessen competition with the *respondent*, *United States Steel Corporation*, through both its said respondent subsidiaries, which are manufacturers of said steel and its said respondent subsidiaries, which are competitors of said consumers, as against all said consumers who are forced to pay respondents' said higher and discriminatory prices for said steel.

(*d*) To substantially lessen competition among all the producers of the said steel in the United States in the sale thereof. All producers of rolled steel in the United States charge the said Pittsburgh base price for their said steel, manufactured in the city of Pittsburgh, and they charge the said Pittsburgh plus price for their said steel manufactured outside of Pittsburgh (except in or near Birmingham), and they charge the said Birmingham price for said steel manufactured in or near Birmingham. Without the maintenance by respondents of the said Pittsburgh plus price and the said Birmingham price, the other producers of said rolled steel in the United States would be unable to maintain said prices.

PAR. 8. That the extra prices extorted by said respondents through said discriminatory price system, as aforesaid, on all public work of the United States and of the respective States, Territories, and

municipalities thereof requiring said steel, aggregate a very large sum annually which the general public must pay through taxation; that the extra prices likewise extorted from all other consumers in the United States aggregate a very large sum annually, which the general public of said country must likewise pay eventually.

PAR. 9. That by reason of the facts hereinabove stated, the respondents—

(1) Have been and are discriminating in price between the different purchasers of their said product in violation of the provisions of Section 2 of an Act of Congress entitled "An Act To supplement existing laws against unlawful restraints and monopolies, and for other purposes," approved October 15, 1914; and

(2) Have been and are using unfair methods of competition in commerce within the intent and meaning of Section 5 of an Act of Congress entitled "An Act To create a Federal Trade Commission, to define its powers and duties, and for other purposes," approved September 26, 1914.

Charge II.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid, have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their merchant bars and rods, rolled steel products manufactured by said respondents, which they sell to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. Said rolled steel products are hereinafter referred to as "said steel" or "said rolled steel."

PARS. 5, 6, 7, 8, and 9. Paragraphs 5 to 9, both inclusive,[16] of Charge I are hereby incorporated herein and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

[16]As amended by order of the Commission dated July 18, 1924 (pursuant to stipulation providing for the amendment of the complaint in various respects, to conform to evidence introduced in the proceedings), as follows:

That paragraph 5 (*b*) of Charges II, IV, V, VI, VII, and VIII be amended to include the words "quote and" before the word "charge" so that the first lines of the paragraph will read as follows:

"(*b*) That for said rolled steel which any of said respondents manufacture outside of the city of Pittsburgh (except where the same is manufactured in or near the city limits of Birmingham, Ala., as hereinafter mentioned), and which they sell to consumers outside of said city of Pittsburgh, they quote and charge such consumers," etc.

Charge III.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid, have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their concrete bars, a rolled-steel product manufactured by said respondents, which they sell to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. Said rolled-steel product is hereinafter referred to as "said steel" or "said rolled steel."

PARS. 5, 6, 7, 8, and 9. Paragraphs 5 to 9, both inclusive, of Charge I are hereby incorporated herein [2] and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

Charge IV.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their structural shapes, a rolled-steel product manufactured by said respondents which they sell to such purchasers for use, consumption and resale within the

---

That paragraph 5 (*b*) of Charges II, IV, V, VI, VII, and VIII be amended by adding to said paragraph the following, to wit:

"The consumer's plant whose freight rate from Pittsburgh is greater than his competitor's freight rate from Pittsburgh is always subjected by respondents through said Pittsburgh Plus prices to a discrimination which is against him and in favor of said competitor."

That paragraph 7 (*b*) of Charges II, IV, V, VI, VII, and VIII be amended by substituting the following paragraph in lieu of said paragraph 7 (*b*), to wit:

"To substantially lessen competition of said consumers with such respondents as are competitors of said consumers of said steel product, by reason of the unfair advantage which the respondents herein derive in competition with the said consumers through the Pittsburgh Plus prices charged said consumers by the respondents."

That paragraph 7 (*c*) of Charges II, IV, V, VI, VII, and VIII be amended by substituting the following paragraph in lieu of said paragraph 7 (*c*), to wit:

"To substantially lessen competition of said consumers with the respondent, United States Steel Corporation, through both its said respondent subsidiaries which are manufacturers of said steel, and its said respondent subsidaries which are competitors of said consumers, by reason of the unfair advantage which the respondents herein derive in competition with the said consumers through the Pittsburgh Plus prices charged said consumers by the respondents."

[2] See footnote 1*a*, on p. 10.

United States, the Territories thereof, and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. The said rolled-steel product is hereinafter referred to as "said steel" or "said rolled steel."

PARS. 5, 6, 7, 8, and 9. Paragraphs 5 to 9, both inclusive, of Charge I are hereby incorporated herein [2] and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

Charge V.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid, have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their plates, a rolled-steel product manufactured by said respondents, which they sell to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. Said rolled-steel product is hereinafter referred to as "said steel" or "said rolled steel."

PARS. 5, 6, 7, 8, and 9. Paragraphs 5 to 9, both inclusive, of Charge I are hereby incorporated herein [2] and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

Charge VI.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid, have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their sheets, including tin and terne plate, which are rolled steel products manufactured by said respondents and which they sell to such purchasers for use, consumption and resale within the United States, the Territories thereof, and the District of Columbia, and (*b*) using unfair methods of competition; all of which is more particularly hereinafter set forth. Said rolled steel products are hereinafter referred to as "said steel" or "said rolled steel."

---

[2] See footnote 1*a* on p. 10.

PARS. 5, 6, 7, 8, and 9. Paragraphs 5 to 9, both inclusive, of Charge I are hereby incorporated herein[3] and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

Charge VII.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers or consumers of their wire rods and products made therefrom, being rolled steel products manufactured by said respondents, which they sell to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*) using unfair methods of competition all of which is more particularly hereinafter set forth. Said rolled steel products are hereinafter referred to as "said steel" or "said rolled steel."

PAR. 5. (*a*) That for said rolled steel which any of said respondents manufacture in the city of Pittsburgh, Pa., they charge the purchasers or consumers thereof a price f. o. b. Pittsburgh, which is hereinafter referred to as the "Pittsburgh base" price or "Pittsburgh" price.

(*b*) That for said rolled steel which any of said respondents manufacture *outside* of the city of Pittsburgh (including the city of Birmingham) and which they sell to consumers outside of said city of Pittsburgh, they quote and charge such consumers a different price than the said Pittsburgh base price, namely a sum equivalent to said Pittsburgh base price *plus* the railroad rate of freight on the said steel from Pittsburgh to the destination thereof, which different price is hereinafter referred to as the "Pittsburgh Plus" price; that said freight charge from Pittsburgh on said steel is purely a fictitious one for it is not shipped from Pittsburgh and no such charge

---

[3] As amended by order of the Commission dated July 18, 1924 (pursuant to stipulation providing for the amendment of the complaint in various respects, to conform to evidence introduced in the proceedings), as follows:

That paragraph 5 (*b*) of Charge VI be amended by striking from the first lines thereof the words in the parentheses reading as follows: "(except where the same is manufactured in or near the city limits of Birmingham, Alabama, as hereinafter mentioned)."

That paragraph 5 (*c*) of Charge VI be stricken from the second amended complaint.

That paragraph 7 (d) of Charges VI and VII be amended by striking from said paragraph the words: "(except in or near Birmingham), and they charge the said Birmingham price for said steel manufactured in or near Birmingham"; and also the words, "and the said Birmingham price" in the sentence reading as follows: "Without the maintenance by respondents of the said Pittsburgh plus price *and the said Birmingham price*," etc.

See also footnote 1a on p. 10.

is incurred; respondents pay only the freight charge incurred, *if any*, on said steel from the plant of its actual manufacture to its destination, but collect from said consumers the fictitious freight charge from Pittsburgh. With the respondents' Pittsburgh base price on said steel in Pittsburgh at $30 per ton, their price at Duluth, Minn., for said steel *manufactured* and *delivered in Duluth* is their Pittsburgh plus price of $43.20, the added $13.20 being the fictitious freight charge extorted by respondents over and above their Pittsburgh price. They pay no freight charge whatsoever in such case. With respondents' Pittsburgh price at $30 per ton, their Pittsburgh plus price for said steel manufactured in Chicago and delivered to LaPorte, Ind., is $7.10 per ton additional, while the only freight charge incurred by them in transporting said steel from Chicago to LaPorte is $3.80 per ton; the difference of $3.30 per ton is the amount extorted by respondents over and above their Pittsburgh price. *Every consumer outside of Pittsburgh is subjected to said discrimination, and the further away his consuming plant is from Pittsburgh, the greater is the discrimination against him.* The consumer's plant whose freight rate from Pittsburgh is greater than his competitor's freight rate from Pittsburgh, is always subjected by respondents through said Pittsburgh Plus prices to a discrimination which is against him and in favor of said competitor.

PARS. 6, 7, 8, and 9. Paragraphs 6 to 9, both inclusive, of Charge I, are hereby incorporated herein [4] and made paragraphs 6, 7, 8, and 9 hereof as though the same were repeated herein.

Charge VIII.

PARAGRAPHS 1, 2, and 3. Paragraphs 1, 2, and 3 of Charge I are hereby incorporated herein and made paragraphs 1, 2, and 3 hereof as though the same were repeated herein.

PAR. 4. That the respondents in the course of their business in interstate commerce, as aforesaid have been for more than seven years last past, and still are (*a*) discriminating in price between different purchasers of their sheetbars, tubular products, angle bars and other rail joints, tie plates, car wheels, spikes, bolts, nuts, and rivets, hoops, bands and cotton ties, forgings, armor plate, steel piling and all other forms of rolled steel products, except rails, not heretofore mentioned in paragraph 4 of Charges I to VII, both inclusive, of this amended complaint, which said rolled steel products are manufactured by said respondents and sold to such purchasers for use, consumption and resale within the United States and the Territories thereof and the District of Columbia, and (*b*)

[4] See footnote 1*a* on page 10 and footnote 3 on page 13.

using unfair methods of competition; all of which is more particu larly hereinafter set forth. The said rolled steel products are hereinafter referred to as "said steel" or "said rolled steel."

PARS. 5, 6, 7, 8, and 9. Paragraphs 5, 6, 7, 8, and 9 of Charge VII are hereby incorporated herein [8] and made paragraphs 5, 6, 7, 8, and 9 hereof as though the same were repeated herein.

REPORT, FINDINGS AS TO THE FACTS, AND ORDER.

Pursuant to the provisions of an Act of Congress approved September 26, 1914, entitled "An Act To create a Federal Trade Commission, to define its powers and duties, and for other purposes," and an Act of Congress approved October 15, 1914, entitled "An Act To supplement existing laws against unlawful restraints and monopolies, and for other purposes," the Federal Trade Commission issued and served its second amended complaint upon the respondents above named, charging them and each of them with violations of said acts, which second amended complaint was, by stipulation with counsel for respondents, subsequently amended to conform to the evidence introduced herein.

The respondents filed their amended answer to the first amended complaint herein and later adopted said amended answer as their answer to said second amended complaint, through their attorneys, whereupon hearings were had before an examiner of the Federal Trade Commission. During the course of such hearings, evidence was introduced herein by the attorneys for the Commission and respondents, respectively. Such evidence was duly certified and forwarded to the Commission. Briefs have been filed herein by the attorneys for the Commission and the respondents, respectively.

A brief *amici curiae* has also been submitted and an oral argument made herein by counsel for the States of Illinois, Iowa, Minnesota, and Wisconsin under special legislative authority of each State, these States acting on behalf of themselves and the other 28 States of the United States making up the membership of "The Associated States Opposing Pittsburgh Plus," namely, Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Utah, and Wyoming.

A brief *amici curiae* on behalf of the Joint Committee of the Civic Organizations of Duluth, Minn., likewise opposing Pittsburgh Plus, has also been submitted herein by counsel for that committee.

---

[8] See footnote 1a on p. 10.

This matter came on for final hearing before the Commission and the Commission having heard arguments of counsel and having duly considered the briefs filed herein and the evidence introduced herein, and being now fully advised in the premises, finds as follows:

FINDINGS AS TO THE FACTS.

PARAGRAPH 1. *The respondents.*—(*a*) The respondent, United States Steel Corporation, is a New Jersey corporation, with its principal office in the City of New York. The said corporation acts as, and is, the holding corporation of, and owns all or substantially all of the capital stock of numerous other corporations engaged in the business of producing, manufacturing, and selling steel and various products made therefrom, including the following named and described respondent corporations hereinafter referred to as its "subsidiaries," to wit:

(*b*) Respondent, American Bridge Company, a New Jersey corporation, engaged in the manufacture and sale of rolled and fabricated steel for, and in the erection and construction of bridges, buildings, and similar structures, at its plants at Minneapolis, Minn.; St. Louis, Mo.; Chicago, Ill.; Gary, Ind.; Detroit, Mich.; Toledo and Canton, Ohio; Ambridge, Pittsburgh, and Pencoyd, Pa.; Edgemoor, Del.; Trenton, N. J.; and Elmira Heights, N. Y.

(*c*) Respondent, American Sheet and Tin Plate Company, a New Jersey corporation, engaged directly and through controlled corporations and leased plants in the manufacture and sale of rolled steel including particularly sheets and tin plate, and products made therefrom, at its plants at Gary and Elwood, Ind.; Cambridge, Cleveland, New Philadelphia, Canal Dover, Canton, Wellsville, Bridgeport, and Martin's Ferry, Ohio; Wheeling, Chester, and Morgantown, W. Va.; New Castle, McKeesport, New Kensington, Monessen, Scottdale, Vandergrift, Hyde Park, Leechburg and Farrell, Pa.

(*d*) Respondent, Carnegie Steel Company, a New Jersey corporation, engaged directly and through controlled corporations and leased plants in the production, manufacture and sale of rolled steel and products made therefrom, at its plants at Clairton, Pittsburgh, Duquesne, Braddock, Munhall, Monessen, Farrell, New Castle, Greenville, and Hyde Park, Pa.; Blaine, Mingo Junction, Youngstown, McDonald, and Columbus, Ohio.

(*e*) Respondent, American Steel and Wire Company, a New Jersey corporation, engaged directly and through controlled corporations and leased plants in the manufacture of rolled steel, including particularly wire rods, wire and products made therefrom, at its plants located at Waukegan, De Kalb, Joliet, and Rockdale, Ill.;

Anderson, Ind.; Tecumseh, Mich.; San Francisco, Calif.; Cleveland and Salem, Ohio; Pittsburgh, Rankin, Braddock, Decorum, Farrell, and Allentown Pa.; Worcester, Mass.; New Haven, Conn.; Trenton, N. J.; and Fairfield, Ala.

(*f*) Respondent, Illinois Steel Company, an Illinois corporation, engaged directly and through controlled corporations and leased plants, in the manufacture and sale of rolled steel, including particularly plates, shapes, and bars, at its plants located at Gary, Ind.; Joilet and South Chicago, Ill.; and Milwaukee, Wis.

(*g*) Respondent, Minnesota Steel Company, a Minnesota corporation, engaged in the production, manufacture and sale of rolled steel, including particularly bars, wire and wire products, at its plant located at Duluth, Minn.

(*h*) Respondent, Tennessee Coal, Iron and Railroad Company, a Tennessee corporation, engaged in the production, manufacture and sale of rolled steel, including particularly plates, bars and shapes, at its plants located at Ensley and Fairfield (near Birmingham), Ala.

PAR. 2. *Respondents are engaged in interstate commerce.*—(*a*) In the course of the business conducted by said respondent subsidiaries and by said respondent, United States Steel Corporation, through said subsidiaries, as hereinafter more particularly set forth, they transport the materials which they use in the manufacture of steel and the products made therefrom, from the States from which the same are taken, through and into other States in which said steel and the products made therefrom are manufactured, and they continually sell and transport from time to time their said steel and the products made therefrom, from the several States of the United States to the purchasers thereof in other States and in the Territories of the United States and in the District of Columbia, and in foreign countries, in direct competition with persons, partnerships and other corporations also engaged in the manufacture, sale and transportation of said products.

(*b*) *Respondents' customers* (*steel consumers*) *are engaged in interstate commerce.*—In the course of the business conducted by the steel users or consumers who purchase their steel requirements from said respondents, for the purpose of reselling the same or manufacturing products therefrom as hereinafter more particularly set forth, they continually sell and transport the steel which they buy and the products which they make therefrom, from the several States of the United States to their customers in other States and in the Territories of the United States and in the District of Columbia in direct competition with persons, partnerships and

corporations also engaged in the manufacture, sale and transportation of steel and the products made therefrom.

PAR. 3. *Steel products defined.*—The basic commodities in steel making are iron ore, limestone, and coal. From these basic materials pig iron is produced and this pig iron is converted into Bessemer steel, open-hearth steel or electric steel, depending upon which type of converter or furnace is used in converting the iron into steel. In the case of open-hearth steel, one-half pig iron and one-half scrap steel are generally used. In making Bessemer steel, scrap steel is not used.

(*a*) The molten steel is poured into ingot molds. The ingots, while still hot, are rolled into blooms, billets, sheet bars and slabs. The blooms are further rolled into structural shapes and rails. The billets are rolled into merchant bars of various kinds and into wire rods from which wire products are made. The sheet bars are rolled into black sheets out of which are made sheets and tin plate. The slabs are rolled into plates.

(*b*) Structural shapes are known as rolled steel products and are mainly used in the construction of bridges and buildings and are in the form of beams and the larger angles, tees, zees, channels, etc.

(*c*) Merchant bars are known as rolled steel products and are in the form of round bars, square bars, flat bars, hexagonal bars, etc. They are used in the manufacture of a great variety of commodities including farm implements, automobiles, machinery, etc. The square bars run from three-fourths to 7¼ inches square.

(*d*) Plates are known as rolled steel products and run from about 6 to 130 inches wide and are one-fourth inch thick and less. They are used in the manufacture of tanks, boilers, barrels, drums, etc.

(*e*) Sheets are known as rolled steel products and are used in the manufacture of roofing, kitchen utensils, sheets metal ware of all kinds, automobile bodies, etc.

(*f*) Tin plates are known as rolled steel products and are sheets coated with tin. Tin plates are used in the manufacture of cans of all kinds, kitchen utensils, roofing, etc.

PAR. 4. *Respondent, United States Steel Corporation, controls its subsidiaries.*—Respondent, United States Steel Corporation, by virtue of its ownership and control of all or substantially all of the capital stock of said respondent subsidiaries, exercises general control, supervision, direction and guidance over the policies and the business conducted by its said respondent subsidiaries and dictates and controls the prices at which the said respondent subsidiaries sell the products which they manufacture.

PAR. 5. *The respondents' position in the steel industry.*—Respondents own their own iron ore mines and limestone quarries, which

supply all of their ore and limestone requirements and also own railroad and steamship lines which serve some or all of the 125 plants belonging to them located in 15 States. They produce about 50 per cent of the total rolled steel production in the United States and do an annual business aggregating approximately one and a half billion dollars. The book value of the capital stock of the respondent, United States Steel Corporation, aggregates over one and a half billion dollars and its undivided surplus aggregates over a half billion dollars.

PAR. 6. *Respondents discriminate in their prices.*—(*a*) In the course of the interstate business done by respondents as aforesaid, they generally quote and sell their plates, shapes, bars, sheets, tin plate and wire and wire products, manufactured at and sold from their plants in the city of Pittsburgh, Pa., at prices f. o. b. Pittsburgh, which are hereinafter referred to as "Pittsburg base prices" or "Pittsburgh prices," to which they add the actual freight charges to the customers' destination, to arrive at their delivered prices.

(*b*) In the course of the interstate business done by respondents as aforesaid, they generally quote, contract for the sale of, sell and invoice their rolled steel products manufactured at and shipped from their plants outside of the city of Pittsburgh at the said Pittsburgh base price plus an amount *equivalent* to what the railroad freight charge on said products would be from Pittsburgh to the customer's destination if such products were actually shipped from Pittsburgh. These last-named prices are known as "Pittsburgh Plus" prices.

(*c*) The system under which respondents make their Pittsburgh base and Pittsburgh plus prices is hereinafter referred to as the Pittsburgh Plus system.

(*d*) In the case of respondents' Pittsburgh Plus prices, respondents pay the actual freight charges on the said products from their mills to the customers' destinations, but the customers pay the Pittsburgh Plus prices as above defined.

(*e*) Respondents' price at Chicago, for instance, which is a Pittsburgh Plus price, is made up as follows: They take their price at which they sell their products at Pittsburgh, say $30 per ton. They add to that price an amount which is equivalent to what the freight charge on such steel products from Pittsburgh to Chicago would be if they were actually shipped from Pittsburgh, or $7.60 per ton, making a total of $37.60 per ton. The Chicago steel user, therefore, who buys his steel from respondents' mill at Chicago must pay $7.60 per ton more than his Pittsburgh competitor pays. In similar fashion, the Duluth steel user must pay $43.20 per ton for the steel he buys from respondents' Duluth mill, while his Pittsburgh com-

petitor pays only $30 per ton, because the imaginary freight charge from Pittsburgh to Duluth is $13.20 per ton. This freight charge is referred to as "imaginary" because there is no freight charge incurred in such case. No matter where, outside of Pittsburgh, the steel is manufactured by respondents, they charge the said Pittsburgh Plus prices. At Milwaukee, a customer backs up his truck to respondents' Milwaukee mill, hauls away the steel himself, but is obliged to pay the imaginary freight charge from Pittsburgh to Milwaukee.

(*f*) One of the exceptions in the case of these Pittsburgh Plus prices was made by respondents in the sale of their plates, bars and shapes from their Alabama mills in 1908, since which time thay have been selling said products partially f. o. b. Birmingham and partially on the Pittsburgh Plus system as will be hereinafter more particularly described. Since the latter part of the year 1921, respondent, Illinois Steel Company, has been selling plates, shapes and bars from its mills in the Chicago district f. o. b. Chicago, as will be hereinafter more particularly set forth.

(*g*) Respondents universally sell their said products at delivered prices and have controlled the routing of such products from the points of shipment to points of delivery.

(*h*) The respondents, in selling their said respective steel products from their mills outside of Pittsburgh at Pittsburgh Plus prices discriminate among the customers of the *same mill*. In the case of two steel users buying steel from the same mill outside of Pittsburgh, that steel user whose plant has a less freight rate from Pittsburgh secured a less price from the respondent than his competitor whose freight rate from Pittsburgh is greater. In other words, the actual freight rates from the producing mill to the customers' plants do not determine the difference between the delivered prices paid by customers buying steel from the same mill.

(*i*) The respondents, in selling their said respective steel products manufactured in Pittsburgh at the Pittsburgh base price, and in selling said steel products sold from their plants outside of Pittsburgh at the Pittsburgh Plus prices, discriminate also in the prices charged their various customers buying steel from *different mills*. Such discrimination, for instance in favor of the Pittsburgh purchasers from respondent, Carnegie Steel Company, and against the Chicago purchasers from respondent, Illinois Steel Company, between November 6, 1903, and June 1, 1907, amounted to $3.30 per ton; between June 1, 1907, and October 26, 1914, $3.60 per ton; between October 26, 1914, and September 20, 1917, $3.78 per ton; between September 20, 1917, and June 25, 1918, $4.30 per ton; between

June 25, 1918, and August 26, 1920, $5.40 per ton; between August 26, 1920, and July 1, 1922, $7.60 per ton. In other words, the said discriminations increased from $3.30 per ton in 1907 to $7.60 per ton in 1920 merely because the freight rate from Pittsburgh to Chicago increased from $3.30 per ton to $7.60 per ton during that period.

(*j*) The discrimination against the Duluth steel user and in favor of the Pittsburgh steel user increased from $6.58 per ton in 1918 to $13.20 in 1920.

(*k*) The discrimination against the Birmingham steel user of wire and in favor of the Pittsburgh steel user of wire in 1920 amounted to $15.30 per ton.

(*l*) The amount of the respondents' prices under the Pittsburgh Plus system varies with the variations in the railroad freight rates from Pittsburgh to the customers' different destinations.

PAR. 7. *Respondents' discriminatory or Pittsburgh Plus prices substantially lessen competition among the steel users.*—As a result of the discriminatory prices charged by respondents under the Pittsburgh Plus system, their customers against whom the discriminations operate are very seriously handicapped. Chicago fabricators of steel buildings and bridges are unable to compete east of Chicago against the Pittsburgh fabricators on straight, competitive structural steel work. Pittsburgh fabricators, on the other hand, compete on an equality in Chicago with the Chicago fabricator, because the freight paid by the Pittsburgh fabricator on his finished product from Pittsburgh to Chicago is offset by the higher price paid by the Chicago fabricator for his steel bought in Chicago. The freight rate on the fabricator's finished product from Pittsburgh to Chicago is the same as the extra price over the Pittsburgh price paid by the Chicago fabricator for his steel.

(*a*) References in these findings to the advantages and disadvantages of the different steel users always refer to the advantages and disadvantages of such steel users as to the cost of their steel and freight at given points under the Pittsburgh Plus system.

(*b*) Nowhere in the United States does the Chicago fabricator have an advantage over the Pittsburgh fabricator. In only a very limited territory can he compete on an equality. That territory is shown on Commission's Exhibit 6893. The city of Chicago is the principal portion of this territory, as the balance of the area is only a small consuming territory. This very limited territory is the area where the through freight rate from Pittsburgh to any point in the area is the same as the combined freight rates from Pittsburgh to Chicago and Chicago to any such point. Where the through rate from Pittsburgh to a customer's destination is less than the com-

bined rates from Pittsburgh to Chicago and Chicago to destination, the Pittsburgh fabricator has an advantage, for he has only to pay the Pittsburgh price on his steel and the actual through freight rate on the finished product from Pittsburgh to the customer's destination. The Chicago fabricator, however, has to pay the Pittsburgh price plus the imaginary freight from Pittsburgh to Chicago on his steel, and then he has to pay the actual freight on his finished product to the customer's destination. With Pittsburgh Plus eliminated the Chicago fabricator's territory would extend half way to Pittsburgh as will be hereafter more particularly shown.

(*c*) At Chicago, the Pittsburgh fabricator, under the Pittsburgh Plus system, competes on an equality with the Chicago fabricator. If, as the record shows, the Chicago mills had a base price the same as the base price at Pittsburgh, the Chicago fabricator would have an advantage of $7.60 per ton over the Pittsburgh fabricator in Chicago. In other words, he would have the same advantage in Chicago which the Pittsburgh fabricator would have in Pittsburgh. The importance of this is seen in the fact that the profit on a structural steel job ranges from $2 to $10 per ton. In the largest jobs, $2 per ton is considered a good profit; the average profit is about $5 per ton.

(*d*) At Pittsburgh, the Pittsburgh fabricator, under the Pittsburgh Plus system, has an advantage over the Chicago fabricator to the extent of $15.20 per ton, while the average profit on a structural job is only $5 per ton. The effects of the Plus system are thus seen distinctly when it is remembered that the Pittsburgh fabricator is at no disadvantage when competing in Chicago.

(*e*) When the Chicago and Pittsburgh fabricators compete in Detroit, where the freight rate to Chicago is less than to Pittsburgh, the Pittsburgh fabricator has an advantage of $7.30 per ton under the Plus system. The effect of this advantage obviously eliminates the Chicago fabricator from Detroit, for the average profit on a structural job is only $5 per ton. Again the effect of the system is best shown by the contrast resulting if the imaginary freight charge from Pittsburgh were eliminated. In such case, the Chicago fabricator would have an actual advantage over the Pittsburgh fabricator in Detroit to the extent of 30 cents per ton as against a disadvantage of $7.30 per ton under the Pittsburgh Plus system.

(*f*) At South Bend, Ind., which is only 86 miles from Chicago, and 400 miles from Pittsburgh, the Pittsburgh fabricator has an advantage over the Chicago fabricator of $4.60 per ton, while the profit on a fabricating job averages only $5 per ton. On large jobs it is only about $2 per ton. With the imaginary freight charge

from Pittsburgh eliminated, the Chicago fabricator would have an advantage of $3 per ton.

(*g*) When these findings speak of the plus or imaginary freight charge as being eliminated, the assumption is that respondents' Chicago mills will charge a base price at Chicago which is the same as their base price at Pittsburgh. In such case the steel user would only have to pay actual freight instead of imaginary freight. If the Chicago base price were lower than the Pittsburgh base price, of course, the advantage of the western fabricators would increase accordingly over the figures above set out. The cost of producing steel at respondents' Chicago mills is much lower than at their Pittsburgh mills.

(*h*) In the case of the manufacturers of heavy drop forgings and screw machine products, and other products where there is a heavy steel waste entailed in the manufacturing process, the Pittsburgh manufacturer has a very substantial advantage over the Chicago manufacturer right in the city of Chicago. This advantage, right in Chicago, as shown by the evidence, amounts to 3.2 per cent of the selling price of the product. With a Chicago base price at Chicago the same as the Pittsburgh base price, the Chicago forging manufacturer would have an advantage of 7.6 per cent of the selling price of his product over his Pittsburgh competitor in Chicago, as against the disadvantage mentioned of 3.2 per cent under the Pittsburgh Plus system.

(*i*) In Detroit, where the freight rate to Chicago is less than to Pittsburgh, the Pittsburgh forging manufacturer has an advantage of 10.5 per cent of the selling price of his product, whereas, if the imaginary freight charge from Pittsburgh were eliminated, he would be at a disadvantage of 0.3 per cent.

(*j*) As James A. Farrell, president of the respondent, United States Steel Corporation, testified in 1913, in the case of the United States against these same respondents wherein a dissolution of the Steel Corporation was sought, where a steel user at Buffalo had to pay $2.20 per ton as Pittsburgh Plus, that steel user (in that case a bolt and nut manufacturer) would be confined to the city of Buffalo when he attempted to market his product.

(*k*) This admission of the president of the respondent, Steel Corporation, that a Pittsburgh Plus of $2.20 per ton restricts a steel user's territory to his own home town illustrates the insurmountable difficulties of the Birmingham wire user who pays $15.30 per ton as Pittsburgh Plus; the Duluth steel user who pays $13.20 per ton, and the Chicago steel user who pays $7.60 per ton as Pittsburgh Plus.

(*l*) As Judge E. H. Gary, chairman of the board of directors of the respondent, United States Steel Corporation, and others, testified in this proceeding, freight rates ordinarily determine a steel user's market. But as the evidence shows, the Pittsburgh Plus system necessarily greatly restricts and frequently extinguishes the market which freight rates would ordinarily determine. With the imaginary freight charge from Pittsburgh eliminated, the Chicago drop forging manufacturer would have an advantage as against his Pittsburgh competitor in territory extending to a line running a little east of Detroit and through Toledo. But with Pittsburgh Plus prices, there is no market where the Chicago forging manufacturer has an advantage or can even compete upon an equality with his Pittsburgh competitor. To the freight rates on his finished product from Chicago to Detroit, Pittsburgh Plus adds 169 per cent; when he goes to Indianapolis, Pittsburgh Plus adds 170 per cent; when he goes to Rockford, Ill., Pittsburgh Plus adds 209 per cent.

(*m*) Another very important factor operating to the great disadvantage of the Chicago manufacturer, or the Duluth manufacturer, or any manufacturer who is subjected to a discrimination under respondents' Pittsburgh Plus prices as against a favored competitor, is the increase in his overhead charge per unit of product caused by the extra prices charged him for his rolled steel. As already shown, the discrimination restricts the Chicago steel user's marketing territory very materially; this restriction in turn restricts his volume of sales and this in turn increased his overhead per unit of product manufactured. The increase in overhead per unit of product increases the Chicago manufacturer's costs and forces him either to cut his profit or add to his selling price. Either method materially handicaps him. When he adds to his selling price, his volume of sales is again restricted, his overhead per unit again increased, and the original handicap makes itself felt in an endless circle of increased overhead charges per unit of product manufactured. A Chicago drop forging manufacturer was only able to operate his shop at 25 per cent capacity because of Pittsburgh Plus. As he testified, an increase of capacity of 60 per cent would not increase his overhead at all, and with an increase of his capacity to 100 per cent, his overhead would not increase more than 10 per cent. A large majority of the 147 witnesses called by the Commission's attorneys testified that the increase in their overhead caused by respondents' Pittsburgh Plus prices and Birmingham Differential prices proved a very serious handicap in and by itself.

(*n*) One witness company having a plant near Pittsburgh and one at Chicago, manufactures 40 per cent of the metal lath produced in the United States. This company actually supplies its carload cus-

tomers in Chicago from its Pittsburgh plant because of the fact that, due to the Pittsburgh Plus system, the volume of business done from the Pittsburgh plant is so much greater that it reduces the overhead cost very much below that at the Chicago plant, and therefore the carload business for Chicago can be supplied to better advantage and at greater profit from the Pittsburgh plant, although the company's main office is in Chicago.

(*o*) The effect of Pittsburgh Plus prices are greatly aggravated in depressed business periods when manufacturers need additional business the most. In such periods the Pittsburgh and other eastern manufacturers of steel products go into the Chicago territory and take business at a very small profit, sometimes below profit, in order to keep their plants going and to spread their overhead charges over a large production. During such times, the Chicago manufacturers likewise need business to keep their plants going and to keep down their overhead charges. But their needs are subservient to the needs of their eastern competitors. These eastern competitors divide and take away much of the needed western business, while the western manufacturers are left helpless without a reciprocal power to invade the East, because of respondents' Pittsburgh Plus prices.

(*p*) A number of steel users found that when using cast iron or cast steel or bronze or brass in their manufactured products, where Pittsburgh Plus prices are not charged they could sell these products sometimes as far east as the Atlantic Coast, while the same manufacturers using steel in the manufacture of the same products were unable to sell such products east of their plants, because of respondents' Pittsburgh Plus prices on steel.

(*q*) A number of steel consumers in the West have either been obliged to put up or contemplate putting up plants in the Pittsburgh district because of the Pittsburgh Plus prices on steel; others cannot afford to do so.

(*r*) The fabricators generally in the West have shown that their plants have not expanded materially for a number of years. Each time the freight rates increase, the Pittsburgh Plus discriminations likewise increase. In other words, every time the freight rates increase, the steel users in the West, buying from western steel mills, must pay more for their steel, while the Pittsburgh steel users do not have to pay more.

(*s*) While under the Pittsburgh Plus system, the western and southern steel users generally are unable to sell their products in the territory of their eastern and northern competitors, or even in parts of their own natural territory, yet these eastern competitors in numerous cases establish warehouses and sales offices in the western and southern territories and employ salesmen who compete actively

for business in those territories. They are at no disadvantage whatever in doing so.

(*t*) The extent to which the western and southern steel users are affected by the Pittsburgh Plus discriminatory prices, varies with the product which they manufacture. Where the steel cost in a finished product represents the major portion of the total cost of that product, the handicap suffered by reason of the Pittsburgh Plus system is very much greater than in the case of products where labor and other elements are the main cost factors and where the steel cost is but a comparatively small or negligible factor.

(*u*) In the case of a very large number of western manufacturers who produce a great variety of products the Pittsburgh Plus prices permit their eastern competitors to compete on an equality in their own western territory, and at the same time prevent them from competing in the territory of those same eastern competitors and in large portions of what would be their natural territory if the Plus were eliminated. Among the products manufactured by these manufacturers, as shown by the record, are agricultural implements, automobile parts, automobile truck bodies and equipment, railway axles and accessories, ships, boats and barges, barn equipment, barrels, drums, tanks, boilers, beds, bolts, bridges and buildings, builders' hardware, filing cabinets, horseshoes, cans, railway and industrial cars of various kinds, metal ceilings, chains, road machinery, conductor pipe and eaves troughs, conduit fittings, drop forgings of many kinds, conveying machinery, corrugated sheets, traveling cranes, culverts and culvert pipe, derricks, metal doors and windows, electrical apparatus, screw machine products of all kinds, wire fence, farm gates, cut gears, household utensils, metal lath, logging and other kinds of machinery, ornamental steel work, picks, mattocks, plumbing material, pole line hardware, pumps, metal screens, sheet metal ware, smoke stacks, springs, metal stampings, sugar handling machinery, tools, towers, windmills, trunk hardware, trucks, wheelbarrows, wheels and a variety of other miscellaneous products.

(*v*) The steel users when competing with competitors who buy steel from the same mill, are seriously handicapped as well as when competing with competitors who buy steel from different mills. For instance, as heretofore shown, the Chicago fabricator buying steel from the Illinois Steel Company at Chicago can not compete in Detroit with the Detroit fabricator buying steel from the same mill. The Detroit and Pittsburgh fabricators, however, can do business in Chicago to the same advantage as in their home cities of Detroit and Pittsburgh, respectively. An Indianapolis steel user has a decided advantage over the Milwaukee steel user, though the Indianap-

olis steel user must buy his steel from Chicago, 184 miles away, while the Milwaukee customer buys his steel from the Milwaukee mill.

(*w*) The discriminatory Pittsburgh Plus prices are found to have very substantially lessened and at times to have destroyed the competition of steel users located at a great number of points, including dozens of cities in the States of Illinois, Wisconsin, and Minnesota. A large number of steel users in the States of Iowa, Nebraska, Missouri, and Indiana, and in such Southern States as Alabama, Georgia. and Tennessee, were very seriously hampered because of the Pittsburgh Plus system.

(*x*) A number of steel users have been forced to discontinue the manufacture of a variety of products made of steel because of the Pittsburgh Plus prices which they were forced to pay. They were unable to compete with their competitors in favor of whom such discriminations operated. In addition to this total destruction of competition caused in a great many cases by the increasing Pittsburgh Plus discriminations, a destruction of further industries is threatened with the continuance of Pittsburgh Plus prices. As a large number of manufacturers testified, they will be ultimately driven out of business if Pittsburgh Plus prices continue.

(*y*) The effects of the Pittsburgh Plus prices on the business of the western steel users has been found, and there will now be shown more fully than has been shown heretofore what the situation would be if the Pittsburgh Plus system were eliminated, and if such steel users were able to purchase their steel at Chicago at the same price as is charged at Pittsburgh. (The cost of producing steel at Chicago, as above stated, is very much less than it is at Pittsburgh.) In such cases, with the imaginary freight charge from Pittsburgh eliminated, and without even assuming a lower price at Chicago than at Pittsburgh, the territory generally where the western steel users could compete on an equality or have an advantage as against their Pittsburgh competitors, would be very greatly increased, as shown by the evidence. At the same time, eastern competitors would be at the same disadvantage in the western territory as the western manufacturers would be when competing in the East. In other words, taking the Chicago fabricator as an illustration, whose territory under the Pittsburgh Plus system, where he can compete on an equality with the Pittsburgh fabricator, is only in the city of Chicago and a small amount of territory in the West, it is found that with the Pittsburgh Plus system eliminated, as indicated, his territory where he could compete on an equality or at an actual advantage as against the Pittsburgh fabricator would be extended to a north and south line drawn substantially half way between Chicago and Pitts-

burgh. This line would run through Detroit and Toledo, east of Columbus and very greatly east of Cincinnati. In all of the territory west of this line, the Chicago fabricator would have an advantage over the Pittsburgh fabricator, and in all territory east of this line the Pittsburgh fabricator would have an advantage. Under the Pittsburgh Plus system, however, the Chicago fabricator has no advantage anywhere in the United States, and is at an actual disadvantage everywhere except in Chicago and in very restricted, small amounts of territory in the West as heretofore mentioned.

(*z*) In the case of the drop forging manufacturer, the contrast is even more striking. Under the Pittsburgh Plus system, the Chicago drop forging manufacturer is at a heavy disadvantage in his home town of Chicago, while with the Pittsburgh Plus prices eliminated as above indicated, he would have the same advantage in the city of Chicago as the Pittsburgh forging manufacturer would have in the city of Pittsburgh, and he could compete on an equality with the Pittsburgh fabricator halfway to Pittsburgh.

(*z–1*) The business of the western manufacturers generally can not grow to the extent of the business of their eastern competitors because of respondents' Pittsburgh Plus prices. The reason is apparent: The market for the Pittsburgh fabricators is the whole United States, while the market for the Chicago fabricators is but a very small part of the United States which it must share with the Pittsburgh fabricators. The capacity of the plants of the Pittsburgh fabricators generally is much greater than that of the Chicago fabricators. The advantage of the Pittsburgh fabricator is repeated in the case of other fabricators west of Pittsburgh and east of Chicago when competing with Chicago fabricators.

(*z–2*) We have used to a great extent the cases of the Chicago and Pittsburgh fabricators, respectively, as illustrations in the foregoing findings. Western manufacturers in general, however, are handicapped by their more easterly competitors even though such competitors purchase steel from the same mill. These handicaps vary from a few cents per hundred pounds to an amount sufficient to seriously affect and substantially lessen and oftentimes to destroy the competition of the manufacturer against whom the discrimination operates.

(*z–3*) Testimony of some 125 witnesses showing a substantial lessening or destruction of their competition in interstate commerce due to Pittsburgh Plus prices, remains undisputed in the record.

PAR. 8. *Respondents' practice of quoting and charging Pittsburgh Plus prices constitutes an unfair method of competition.*—The quoting and charging by respondents of their system of Pittsburgh Plus prices prevents their customers against whom the discriminations

resulting therefrom operate, from competing on an equality, or from competing at all, with their competitors in favor of whom such discriminations operate, and such practice constitutes an unfair method of competition.

PAR. 9. *Pittsburgh Plus prices defined.*—By a system of Pittsburgh Plus prices, as used in these findings, is meant respondents' system of prices for its said products manufactured at and shipped from points outside of Pittsburgh, which are their f. o. b. Pittsburgh prices plus amounts equivalent to what the railroad freight charges on such products would be from Pittsburgh to each different destination if such products were actually shipped from Pittsburgh.

PAR. 10. *Respondents' discriminatory or Pittsburgh Plus prices substantially lessen competition of their steel customers with respondents.*—The evidence shows that the respondent, United States Steel Corporation, through its subsidiary, the respondent, American Bridge Company, which does over 40 per cent of the steel structural building and bridge business of the whole United States, has a very decided advantage over the Bridge Company's western competitors by reason of the Pittsburgh Plus prices charged such competitors by the steel producing subsidiaries of the respondent, United States Steel Corporation. The Chicago fabricator of buildings or bridges who buys his steel from respondents' Chicago mills, is obliged to pay $7.60 per ton more than the Pittsburgh price. (All references to Pittsburgh Plus in these findings relate to the freight rates in effect during the period when most of the testimony was taken in this proceeding.) When the American Bridge Company bids on a job, it can get that job and does get it when it really wants it. That company can bid on a job at cost, and yet the respondent, United States Steel Corporation, through its subsidiary, the Illinois Steel Company, will make a double profit on the steel used in the job—the ordinary profit derived from the manufacture of steel and the extra profit due to the Plus system. As $7.60 per ton is added to the Pittsburgh price in the case of steel sold at Chicago, the respondent, American Bridge Company, has a great leeway in bidding against its western competitors because the average profit on a structural job is only $5 per ton. It and respondent steel producing companies have greatly benefited by the Pittsburgh Plus system. The Chicago district plants of respondent, American Bridge Company, are twenty times as large as the plant of its nearest local competitor, and thirty or more times larger than most of its local competitors who have been in business for many years, some of them for a much longer period of time than the respondent, United States Steel Corporation.

(*a*) Respondents' customers who manufacture boats and barges find the same difficulty as the fabricators of bridges and buildings in competition with respondent, American Bridge Company, which also manufactures boats and barges.

(*b*) The same thing holds true with reference to the disadvantage suffered by respondents' customers who compete with respondent, American Steel & Wire Company. For instance, in the case of a patented clip manufactured by one of respondents' Minneapolis customers, the respondent, American Steel & Wire Company was originally made the selling agent for this clip. Upon the expiration of the patent, the respondent company refused to act as agent for the clip, but started to manufacture the clip itself. Now the Minneapolis manufacturer pays $18,000 annually as Pittsburgh Plus in the manufacture of this clip while competing against the respondent, American Steel & Wire Company, which gets its steel from other respondents as does the respondent, American Bridge Company. Among respondents' customers who compete with the respondent, Wire Company, are those who manufacture farm gates, wire fence, wire products, etc.

(*c*) In Birmingham, Ala., where respondents' Pittsburgh Plus price on wire and wire products is $15.30 per ton higher than respondents' Pittsburgh price, it would be impossible for any steel user buying steel from respondent's Birmingham plant to compete with respondent in cases where respondents wanted the business.

(*d*) The respondent, American Sheet & Tin Plate Company, competes with the customers of respondent, Illinois Steel Company, in the manufacture and sale of corrugated roofing, and of course has the same advantage under the Pittsburgh Plus system as has been shown in the cases of the respondents, American Bridge Company and American Steel & Wire Company.

PAR. 11. *Respondents' practice of quoting and charging their customer-competitors Pittsburgh Plus prices constitutes an unfair method of competition.*—The quoting and charging by certain respondents of a system of Pittsburgh Plus prices to their customers with whom they or certain other respondents compete, as hereinabove set out, is unfair to such customer-competitors, and gives the respondents an unconscionable advantage over such customer-competitors, and constitutes an unfair method of competition as against such customer-competitors.

PAR. 12. *Respondents' discriminatory or Pittsburgh Plus prices substantially lessen competition among the steel producers.*—Pittsburgh Plus prices substantially lessen the competition among steel users, as hereinbefore described. Pittsburgh Plus prices also substantially lessen price competition among the steel producers,

(*a*) Any difference generally in prices of plates, shapes, and bars existing among the steel producers under the Pittsburgh Plus system at any point and at any time would be due to a difference in delivery.

(*b*) The respondent, American Sheet & Tin Plate Company actively cooperates with the National Association of Sheet & Tin Plate Manufacturers in price fixing activities. As many of respondents' own witnesses among the sheet and tin plate manufacturers admitted, their prices on the Pittsburgh Plus system were the same or "on a parity" with those of their competitors, and as many of them testified, where differences in prices existed, such differences were due to the fact that some steel was sold for immediate delivery and some for future delivery and that the prices of the different deliveries were not the same.

(*c*) As respondents' own witness, a sales manager of respondent American Steel & Wire Company, testified, there is no price competition among the wire manufacturers, save in exceptional instances where two or three small mills sometimes sell their products *f. o. b. their mills* and force their competitors to meet those prices in the immediate vicinity of those mills. All wire mills with these occasional exceptions charge the same Pittsburgh Plus prices at any given point.

(*d*) Analyses of 3,502 contracts introduced in evidence by the Commission's attorneys through their witnesses, who selected them generally at random, covering the sale of plates, shapes, and bars over many years, from 1902 to 1922, made by various steel producers including respondents, showed that 70.7 per cent of the contract sale prices in such contracts were based upon the identical Pittsburgh prices quoted in the Iron Age, a steel trade publication, and 19.4 per cent within 5 cents per hundredweight thereof, or a total of 90.1 per cent either identical or within 5 cents per hundredweight thereof. Substantially the same percentages of uniformity resulted from a comparison of these contract prices with the contract prices of respondent, Carnegie Steel Company.

(*e*) Analyses of 3,700 contract sales prices of plates, shapes, and bars taken from contracts of the respondent, Illinois Steel Company, over a number of years and introduced in evidence by respondents, showed that 71.8 per cent of such contract prices were based upon the identical Pittsburgh prices quoted in the Iron Age, and 20.6 per cent within 5 cents per hundredweight thereof, or a total of 92.4 per cent, either identical or within 5 cents per hundredweight thereof. Similar comparisons made with the respondent, Carnegie Steel Company's Pittsburgh price showed substantially the same percentages of equality as in the case of the Iron Age prices. Many similar comparisons for specific years are contained in the record of the case.

(*f*) Five cents differences in contract prices are frequently found when there is a change of 5 cents made in the price of steel by a leading producer at Pittsburgh. In such case, several days or more may elapse before all of the steel producers change their prices accordingly, and contracts made during the interim will reflect this 5 cents difference. The prices of respondent, Illinois Steel Company, oftentimes do not follow the change of the respondent, Carnegie Steel Company, on the same day; such changes sometimes do not follow for several days.

(*g*) Price competition, therefore, was entirely eliminated to the extent of the uniformity shown above. No price fixing device functions 100 per cent as a general rule, even though penalties may be inflicted upon those who cut the prices agreed upon. As a means of restraining and eliminating price competition, the Pittsburgh Plus practice is and has been very effective.

(*h*) While uniformity of prices among the steel producers might indicate the presence of price competition if such prices were uniform, f. o. b. the producing mills of the different producers in each different section, yet such character of uniformity is not the uniformity found in the Pittsburgh Plus prices. The Pittsburgh Plus uniformity is a uniformity of delivered prices at every delivery point in the country from every mill in the country. Pittsburgh Plus prices are not uniform f. o. b. the several producing mills; on the contrary they are greatly variant. They are greatly variant when figured f. o. b. the mill to even the customers of the same mill. As will be shown later, uniform Pittsburgh Plus prices can be produced only by a restraint of price competition. Each time price competition occurred to a substantial extent in the steel industry, Pittsburgh Plus prices disappeared. Each time the Pittsburgh Plus prices reappeared, price competition had accordingly ceased.

(*i*) If respondents abandoned their Pittsburgh Plus prices, their competitors would have to do likewise. Respondents' prices are generally followed by their competitors. If respondents quoted and sold their products f. o. b. the mill, their competitors could not sell their products according to the Pittsburgh Plus practice.

(*j*) Respondents' discriminatory or Pittsburgh Plus prices substantially lessen competition among the steel producers in the interstate sale of rolled steel products.

(*k*) In addition to the foregoing, it is found that the steel producing respondents and their competitors employ uniform contract provisions, uniform extras, and differentials, and that the sheet manufacturers particularly, including respondents' sheet manufacturing subsidiary, use the same freight rate books, the same tolerances, the same sheet bar weight books, and use the Pittsburgh Plus system

in their price fixing activities, all of which will be hereafter more fully referred to. The continuous use of any one or all of these adjuncts in price fixing is entirely consistent with the uniform delivered prices which are sought to be and are actually attained thereby. It is necessary to use these adjuncts to reach absolutely uniform Pittsburgh Plus prices by all of the steel producers, and in using them the desired results are obtained; it would be futile to use them if such results were not obtained. Indeed, the Pittsburgh Plus system was adopted by the producers for the purpose of reaching absolutely uniform prices at any given point, or in the words of Judge Gary, " it was deemed necessary for the orderly conduct of the business to have *one basing price*, * * * so that every user of steel all over the country bought and used his steel on a certain basis, knowing in advance that everyone else who bought steel had to pay *exactly* as he did, *with the addition of the increased freight depending upon where he wanted to use the steel.*"

The evidence in the record fully proves that the wish to provide an absolutely uniform price at any given point by all the producers was and is met by the Pittsburgh Plus system. The Pittsburgh base prices of the respondents are followed generally by all other steel producers in arriving at their delivered prices.

(*l*) Respondents introduced a number of exhibits in an attempt to prove nonuniformity of Pittsburgh Plus prices. The findings shall treat of these. The respondents make a large number of specialties for agricultural implement manufacturers. There is no agreement or understanding with reference to the prices of these specialties among the steel producers; there is no uniformity in their prices for these specialties. The steel used in making these specialties is of a different character than that used in making the ordinary bars, plates and shapes, and the two are not comparable as to character, nor as to the prices charged for them. The nonuniformity in the prices of these specialties among the steel producers does not tend to prove nonuniformity in the Pittsburgh Plus prices of plates, shapes and bars among the steel producers. Respondents' comparisons in their said exhibits of the prices of these specialties with the prices quoted by a steel trade paper on plates, shapes and bars did not tend to establish a nonuniformity of Pittsburgh Plus prices.

(*m*) At times the agricultural implement manufacturers were granted concessions in prices by the steel producers, and at other times they were charged Pittsburgh Plus prices. Comparisons by respondents in their said exhibits of such concessions made generally by the steel producers, with the standard prices quoted in a steel

trade paper did not tend to establish a nonuniformity of Pittsburgh Plus prices.

(*n*) In their said exhibits, respondents also compared prices made by them on a Chicago base with Pittsburgh base prices quoted in a steel trade paper, in an endeavor to show that Pittsburgh Plus prices are not uniform. Such comparisons did not tend to establish a nonuniformity of Pittsburgh Plus prices; they did prove that Chicago base prices were not the same as Pittsburgh Plus prices.

(*o*) Many other objections appearing from an examination of respondents' said exhibits need not be considered here in view of the foregoing.

PAR. 13. *Respondents' discriminatory or Pittsburgh Plus prices adversely affect the public interest.*—The cost of producing steel at respondents' Chicago and Birmingham plants is approximately 20 per cent less than at their Pittsburgh plants. The cost at Birmingham is slightly less than at Chicago. As shall be shown later, there is a great surplus production in both the Chicago and Birmingham districts. Yet the prices at which respondents sell their steel at Chicago and Birmingham is very much greater than at Pittsburgh. This is best illustrated by Commission's Exhibit 6853, which shows that the spread between the cost of producing and selling price of steel bars at respondents' Pittsburgh mills at a given time was $2.10, while at Chicago it was $13.80; at Duluth, $8. Consequently the public at Chicago pays $11.70 more per ton over the cost of producing steel bars than the public at Pittsburgh pays; the public at Birmingham and Duluth pays $8 more per ton over the cost of producing steel bars than the public at Pittsburgh pays. In one Chicago building alone, the Federal Reserve Bank Building, the imaginary freight on the steel amounted to over $76,000, which went to respondent, Illinois Steel Company. In five years the Manitowoc Shipbuilding Company paid respondent, Illinois Steel Company, $140,000 as imaginary freight which the United States Shipping Board had to pay. Deere & Company, farm implement manufacturers, pay $488,400 annually as imaginary freight, while the farmers who purchase their implements must pay over double this amount, or over $1,000,000 annually, as extra prices for Deere & Company's implements, because of this imaginary-freight item. In other words, for every dollar which the farm implement companies pay as Pittsburgh Plus, the farmers must pay more than double every such dollar, because to the actual Pittsburgh Plus paid by the farm implement manufacturer must be added the various percentages of overhead, selling expenses and profits which are borne in the ordinary course of business. The figures are undisputed in the record. As the president of the American Farm Bureau Federation, representing more than a million and a quarter

farmers, testified, the double Pittsburgh Plus imaginary freight thus paid by the farmers in only eleven middle western States amounted to around $30,000,000 annually. The farmers in the other States would use even more steel than those in the 11 States figured in the calculations. The Emerson-Brantingham Company, a farm implement manufacturing company pays around $100,000 annually as Pittsburgh Plus imaginary freight, which means that its customers must pay around $200,000 annually more than they would have to pay if the Chicago district mills eliminated Pittsburgh Plus as hereinabove mentioned. The Litchfield Manufacturing Company, a farm implement manufacturing company, pays $68,000 annually as imaginary freight, and its customers pay twice that amount. Pittsburgh Plus resulted in an addition to the list prices of J. I. Case Threshing Machine Company, an agricultural implement manufacturing company, in the year 1920, of $509,033, which amount the farmers would have been saved if Pittsburgh Plus had not been charged. A Minneapolis manufacturer pays $84,000 annually as Pittsburgh Plus, and so on.

(*a*) On all the public work of the United States, as well as on all the work done for private concerns, the public must eventually pay the extra prices which the Pittsburgh Plus practice yields to the steel producers.

(*b*) Pittsburgh Plus adds millions of dollars each year to the price paid by steel users outside of Pittsburgh, which of course must eventually be paid by the public.

(*c*) As testified to by three eminent economists called by attorneys for the Commission, the Pittsburgh Plus system inevitably raises prices to the public, as we shall show more specifically later. This testimony was fully borne out by many actual experiences in the steel industry. In every case where the steel producers charged f. o. b. mill prices instead of Pittsburgh Plus prices, the latter were higher than the former. In the earlier days, when the Pittsburgh Plus discriminations were not so great, there was not, of course, so great a difference as in later years when the discriminations constantly increased. In portions of 1922 and 1923, when the Chicago base price was the same as the Pittsburgh base price, it was $7.60 per ton less than the Pittsburgh Plus price would have been. When the Chicago base price was lower than the Pittsburgh base price, as it was during a portion of that time, the difference was even greater. With steel selling at $30 or $40 per ton, it is apparent that the difference is very substantial.

(*d*) As likewise testified to by these three economists, and as likewise borne out by actual experience of the steel industry, the Pittsburgh Plus system retards the steel producing development and steel consumption of every section of the United States except Pittsburgh.

It abnormally increased the development of the Pittsburgh mills and accordingly restrains the development of the mills outside of Pittsburgh.

(*e*) The development of the steel producing mills at Pittsburgh is abnormally increased because, under the Pittsburgh Plus system, the market of the Pittsburgh mills is the entire United States. The development of the steel producing mills outside of Pittsburgh is restrained because they are obliged to share their markets with the Pittsburgh mills and can not without lowering their prices, invade other markets.

(*f*) Steel consumption at points outside of Pittsburgh is restrained by the Pittsburgh Plus system because of the handicaps suffered by the steel users at such points as hereinabove indicated. In other words, they must share their markets with their Pittsburgh competitors, while they do not have the reciprocal privilege of sharing the Pittsburgh market, or, indeed, of markets which would be their own markets if Pitsburgh Plus were eliminated. Furthermore, the added cost of steel to the steel users outside of Pittsburgh lessens the extent to which steel is used generally.

(*g*) If free competition existed in the steel industry, the prices in the Chicago and Birmingham districts would fall to a level consonant with the lower cost of production at those points, which they have failed to do under the Pittsburgh Plus system.

(*h*) The influence of the Pittsburgh Plus system has already been felt beyond the steel industry. The Interstate Commerce Commission has refused the application of a railroad company to increase its freight rates, in a decision in which the Commission stated that to do so would automatically increase the price of steel, because every time the railroad freight rates are increased from Pittsburgh, the steel producers increase their steel prices accordingly. (I. C. C. Docket No. 1837, decided September 29, 1923.)

PAR. 14. *Respondents' discriminatory or Pittsburgh Plus prices are not made in good faith to meet competition.*—Pittsburgh Plus prices are not made in good faith to meet competition. They were originally adopted by the steel producers generally as the basis for their price-fixing activities, and are still used for the same purpose. It was, and still is, only necessary for the steel producers to use the same Pittsburgh price as the basis for their prices covering their various rolled steel products in order to maintain uniform Pittsburgh Plus discriminatory prices. The price at every locality in the United States automatically becomes the Pittsburgh price, plus an amount which would equal the freight on the steel from Pittsburgh to destination, if the steel were actually shipped from Pittsburgh. The system has worked very effectively. While the Pitts-

burgh Plus system was used as the basis for the agreed prices fixed by the original pools, trade meetings and Gary dinners, it was found later that such price system obviated the necessity of such pools, price-fixing trade meetings and Gary dinners; so it finally succeeded these three plans, and as such successor it still continues.

(*a*) No systematic Pittsburgh Plus system has been adopted by the steel producers at the time of Pittsburgh's greatest predominance in the steel industry or until after 1900. From 1873 or earlier, to 1903, steel producers attempted, generally, with some success, to fix prices for steel products through pools, price-fixing trade meetings and, later on, through what are known as the Gary dinners. From 1903 to 1909 the Pittsburgh Plus system of quoting and selling said steel products was used in conection with and as a basis for the price-fixing activities of the steel producers. From 1909 to the present time, with minor interruptions the Pittsburgh Plus system has been used by the steel producers independently of such pools, price-fixing trade meetings and Gary dinners for the purpose and with the effect of reaching uniform delivered prices. In 1921 with the advent of price competition on plates, shapes and bars, the Pittsburgh Plus system was discontinued by the Chicago district mills in their sales of those products, but not in their sales of sheets and tin plate and wire and wire products, as to which articles in that district and everywhere else Pittsburgh Plus prices still prevail.

(*b*) The bar manufacturers, including the respondents, Illinois Steel Company and Carnegie Steel Company, met in 1902, and agreed upon the Pittsburgh Plus system as a basis for fixing and maintaining uniform delivered prices. Such action was wholly inconsistent with making prices in good faith to meet competition.

(*c*) The plate manufacturers and structural shape manufacturers, respectively, including the said last-named respondents, met in December, 1903, and agreed upon the Pittsburgh Plus system as a basis for fixing and maintaining uniform delivered prices on plates and shapes, respectively. Such action was likewise wholly inconsistent with making prices in good faith to meet competition.

(*d*) The wire nail producers, including the respondent, American Steel & Wire Company, agreed on zone prices in 1898; in 1904 the large wire producers agreed to maintain uniform prices by means of the Pittsburgh Plus system. Such action was wholly inconsistent with making prices in good faith to meet competition.

(*e*) The Pittsburgh Plus system was adopted in 1900 in the selling of tubes by the respondent, National Tube Company, because Pittsburgh was regarded as the point of lowest cost of production. Notwithstanding the relative changes in the cost of production in the

various districts as hereinabove indicated, the respondent tube companies and all tube companies still sell their pipe and other products on the Pittsburgh Plus system. The prices thus made were not and are not in good faith to meet competition.

(*f*) The Pittsburgh Plus system was adopted by the billet manufacturers in 1900 as the basis for their agreed prices.

(*g*) The bolt, nut and rivet manufacturers adopted the Pittsburgh Plus system in 1918 by agreement.

(*h*) Prior to the year 1900, sheet steel was not sold on the Pittsburgh Plus system, and even after the absorption of a large number of sheet mills by the American Sheet Steel Company (which was later taken over by the respondent, American Sheet & Tin Plate Company), that company sold its sheets in the Chicago district f. o. b. its mills in that district. In the fall of 1900 however, that company inaugurated the Pittsburgh Plus system in selling its sheets, and the respondent, American Sheet & Tin Plate Company has followed the system ever since, practically without exception.

(*i*) Prior to 1900 to 1903, the tin mills sold their product generally f. o. b. the mill, but after the absorption of many tin mills by the American Tin Plate Company (which was shortly afterward taken over by the respondent, American Sheet & Tin Plate Company), that company inaugurated the Pittsburgh Plus system in selling its tin plate from its various mills. In 1903, it announced as to its Indiana mills, that tin plate would no longer be sold f. o. b. the Indiana mills, but would be sold thereafter on the Pittsburgh Plus system because of the higher cost of production at the Indiana mills. The respondent, American Sheet & Tin Plate Company has continued the Pittsburgh Plus system ever since on tin plate. Such prices were not and are not made in good faith to meet competition.

(*j*) Uniform Pittsburgh Plus prices on sheets have been effectually maintained by the sheet steel producers, notwithstanding the fact that there are many small sheet mills. It has proved difficult for the steel producers to hold a number of small mills to price agreements or understandings during periods of business depression. But the sheet producers of the United States are members of an organization known as the National Association of Sheet & Tin Plate Manufacturers. Nearly every independent sheet producer is a member. The respondent, American Sheet & Tin Plate Company, is not a member, but actively cooperates with the association in its price-fixing activities, which constitute an important part of the association's work. The prices of the said last named respondent company are furnished to the association and by the association wired to all of its members generally before they are announced to the public. The members generally adopt the new prices as their

own. Without the leadership of respondent company, in announcing its prices, the association finds it difficult to maintain uniform Pittsburgh Plus prices among its members.

(*k*) The said respondent company and its competitors exchange letters regarding prices charged and to be charged by them. If a producer is found to be cutting prices, the matter is diligently pursued by both respondent and its competitors with a view of discouraging such price cutting.

(*l*) All of the foregoing mentioned price-fixing activities are wholly inconsistent with making prices in good faith to meet competition.

(*m*) The respondent steel-producing subsidiaries and their competitors use the same extras and differentials, and the respondent, American Sheet & Tin Plate Company has helped the said association distribute the booklets containing the uniform extras among the members of the association. All the steel producers use uniform extras and differentials in order to arrive at uniform delivered prices. They could not reach such uniform delivered prices without maintaining uniform extras and differentials. The use of these uniform extras and differentials is wholly inconsistent with making prices in good faith to meet competition.

(*n*) The respondent, American Sheet & Tin Plate Company, at great expense to itself, prepares a compilation of freight rates on sheets from Pittsburgh to practically every consuming point in the United States. It furnishes copies of this freight rate book, and all subsequent changes made from time to time, to its competitors. At first it gave these books to its competitors, but now it charges a nominal price for them. The respondent company expects the recipients of these books to use them. The use of them by all steel producers is necessary if all such producers are to arrive at exactly the same Pittsburgh Plus price at each given point. The freight tariffs are complicated and oftentimes there are two or more different freight rates between two points given in the different tariffs. The freight traffic expert's duty under the Pittsburgh Plus system is to find the lowest rate existing from Pittsburgh to every consuming point. Different traffic experts might not arrive at the same results, and therefore a uniform freight rate book is absolutely necessary in order that the steel producers may reach absolutely uniform Pittsburgh Plus prices. The use of this common freight rate book prepared at respondents' expense is wholly inconsistent with making prices in good faith to meet competition.

(*o*) The respondent company, as above indicated, supplies this necessary link in the making of ultimate uniform discriminatory prices by all steel producers.

(*p*) The respondent and its competitors likewise use the same table of tolerances and the same sheet bar weight book, each of which has a bearing on the ultimate prices charged for their products and each of which permits them to reach absolutely uniform delivered prices at all points in conjunction with a due observance of a uniform base price, uniform freight rates and uniform extras and differentials, as above mentioned. The use of all these adjuncts for the purpose of reaching uniform Pittsburgh Plus prices is wholly inconsistent with making prices in good faith to meet competition.

(*q*) All of the steel producers have the substantially, identical provision in their contracts, which provide that if the freight rate on steel from Pittsburgh to any given point is increased during the life of the contracts, the price of the steel in such contracts shall be automatically increased accordingly. This provision, of course, applies to all of the said rolled steel products, regardless of where they are manufactured and regardless of the point from which they are shipped. If the price of steel is increased during the life of such contract, the steel customer is protected against such increase, but if the freight rate from Pittsburgh to Chicago, for instance, is increased during the life of such contract, the Chicago steel customer must pay a correspondingly increased contract price for his steel, even though in such case he incurs no freight charge whatever. This contract provision has a very important bearing in the ultimate uniform delivered prices to be reached by the steel producers. The use of this uniform contract provision is wholly inconsistent with making prices in good faith to meet competition.

(*r*) The independent steel producers, generally, use the same Pittsburgh base price in making up their Pittsburgh Plus prices as that quoted by respondents on each of the said rolled steel products.

(*s*) *The Pittsburgh Plus system itself is evidence that free competition does not exist.*—As the three economists hereinabove referred to testified and as other evidence in the record clearly shows, price competition among the steel producers brings about f. o. b. mill prices. *A priori*, the lack of competition is evidenced when Pittsburgh Plus prices are in effect. Price competition is evidenced by uniform f. o. b. mill base prices, uniform to all the customers of the same mill, and uniform among the different producers in the same market. Such prices, however, are not respondents' Pittsburgh Plus prices. Pittsburgh Plus prices are not f. o. b. mill prices; they are prices made f. o. b. Pittsburgh. They are not uniform prices from the producing mill; they are discriminatory from the mills. They vary according to what the freight rate is from Pittsburgh to each of their customers' plants. The customer at Chicago pays the Chicago mill a higher price than the customer 50 miles

east of Chicago because the imaginary freight rate to Chicago is higher than it is to a point 50 miles east of Chicago. The customer 100 miles east of Chicago pays less than the customer 50 miles east of Chicago, and so on. In other words, Pittsburgh Plus prices are terraced prices. From the Chicago mills, for instance, they terrace downward from Chicago, for Chicago is the top terrace where the Chicago mill gets its highest price for steel under the system. The next highest terrace of prices is in that territory of the next highest freight rate from Pittsburgh, and so on, until Pittsburgh is reached. At Pittsburgh the Chicago mill nets $15.20 less than its Pittsburgh Plus price at Chicago and $7.60 less than the Pittsburgh Base price. Pittsburgh then becomes the lowest terrace of net returns for the Chicago mills. And so in the case of the steel buyer as he moves west from Pittsburgh, he climbs the price terraces. With each terrace he mounts, he finds the price he pays the Chicago mills is higher, though he gets nearer Chicago all the time. At Pittsburgh he pays the Chicago mills, say, $30 per ton. At Detroit he pays them considerably more. When he arrives right at the Chicago mills, he is forced to pay them the highest prices they charge, namely, $37.60 per ton. Customers in the same terrace are charged the same delivered prices by all the steel producers all over the country under the Pittsburgh Plus system. Customers in different terraces are charged different prices. Customers at the mill door are obliged to pay a sufficiently high price to reimburse the steel producer for the lesser profit or loss of profit he suffers when dumping his surplus steel at lower prices nearer Pittsburgh, as will be hereafter more fully explained.

(*t*) No such system of terraced prices—that is, a system of varying net returns to the steel producers—occurs when there is price competition among such producers. From the time the Pittsburgh Plus practice was adopted by the steel industry to the present time, Pittsburgh Plus prices disappeared whenever substantial price competition occurred in the Chicago district; prices of steel producers in such cases were made f. o. b. their respective producing mills. When the Pittsburgh Plus prices were resumed, price competition had ceased.

(*u*) When price competition forced the steel producers to charge f. o. b. mill base prices, there was no system of terraced prices from the mill. All customers from the same mill got the same f. o. b. mill price, and they paid the actual freight on their steel from the mill to their plants. Respondents' Pittsburgh prices are f. o. b. the mill and they are the same f. o. b. the mill to all customers.

(*v*) *The delivered price restrains competition.*—Under the Pittsburgh Plus system, the steel producers sell their products at delivered

prices and contract for the sale of and invoice said products at delivered prices. The customers do not know how much they are paying for steel and how much for freight. There can be no free competition among the buyers of steel until they know how much they and their competitors are charged for steel at the mill door. Under the Pittsburgh Plus system, they only know how much the delivered price is, but do not know what part of that delivered price is steel and what part is freight. Under the practice of quoting and selling f. o. b. the mill, all the customers of the mill know what their competitors are paying for steel at the mill and they would not permit discriminations such as exist under the Pittsburgh Plus system. Thus, have the economists testified, and thus, has steel history worked out as clearly shown by other evidence in the record. Each time respondents' mills have charged f. o. b. mill prices to their customers, those prices from each mill were the same to all the customers of each such mill.

(*w*) *Competition is restrained by the Pittsburgh Plus system.*— The economists have explained the principle of indifference which must operate when there is free competition. The principle of indifference so acts that the seller is perfectly indifferent to what buyer he sells his steel at a given price. Under the Pittsburgh Plus system the seller is not indifferent to what buyer he sells his steel. The principle of indifference is not operating; there can not therefore be free competition. The seller is not willing to sell to all who apply for his steel at a given price. He demands to know to what city the buyer expects to send his steel before he will name his price. His price varies according to the buyer's destination. The Chicago mill will not sell its steel f. o. b. the mill to a Chicago customer at the same price it sells that steel to a St. Louis customer. It names a price to the St. Louis customer which nets it less than the price it names to the Chicago customer who is located at its very door. Under the mill base system, the Chicago and St. Louis customers get exactly the same price, f. o. b. Chicago. Under the Pittsburgh Plus system, the St. Louis customer gets a price f. o. b. Pittsburgh plus imaginary freight to St. Louis, and the Chicago customer gets the same Pittsburgh price plus imaginary freight to Chicago. In neither case does the buyer know how much is charged for steel and how much for actual freight. The buyers are not allowed to deal in steel at the mill door. The discriminations among them are concealed. Under the mill base system such discriminations are immediately disclosed, and the buyers would not tolerate them and hence they could not exist. Such is the testimony of the economists and such is steel history as conclusively shown by other evidence in the case. In all instances

where respondents charge mill base prices, those prices are uniform to customers of the same mill.

(*x*) *Supply and demand.*—There is no free operation of the law of supply and demand under the Pittsburgh Plus system. Under the Pittsburgh Plus system, the natural territory of the Chicago district mills is a small restricted territory which includes the city of Chicago and portions of a few middle west and Rocky Mountain States, as shown on Commission's Exhibit 6893. The consumption of steel in this natural distributing territory, except in Chicago, is small. In this territory, the Chicago mills receive their highest net return under the Pittsburgh Plus system. They allow Pittsburgh and other eastern mills to share this territory with them, even though they produce much more than is necessary to supply the demand in it. They are consequently forced to, and they do, either curtail their production or "dump" their surplus material in territory where they do not get this highest net return. Respondent, Illinois Steel Company, dumps its surplus, amounting to approximately 50 per cent of its entire production of the said products in the terraced territory where it receives the terraced prices. This dumping is analogous to dumping into foreign countries by domestic concerns for the purpose of getting rid of a surplus at lower prices and thus keeping up the domestic prices. Thus the Chicago mills get rid of their surpluses at lower prices and thereby keep up their prices to their Chicago customers. When "dumping" occurs, it indicates there is a surplus. Other Chicago mills and other mills outside of Pittsburgh dump to a very large extent. Respondents' Chicago mills also dump a vast tonnage into foreign countries where as the evidence shows they generally receive substantially lower prices than in the United States. Such is the situation under the Pittsburgh Plus system. Indeed, as all the economists testified, it is apparent that the Pittsburgh Plus system could continue even though Pittsburgh producers ceased to produce steel. All the mills outside of Pittsburgh could continue dumping their surpluses (in the absence of price competition) as they are doing to-day, and thus hold up their Pittsburgh Plus prices at Chicago and everywhere else. The amount of dumping to be done by the mills outside of Pittsburgh and the amount of curtailment of operation depend of course on the price of steel; the higher the price, the more dumping and the less curtailment, and vice versa, as the record shows. The Pittsburgh Plus system causes a greater tonnage of steel products to be shipped by eastern mills into the West than by western mills into the East because of the fact that the market of the Pittsburgh mills is the entire country, including the West,

while the western mills can not go into the East without taking lower and lower prices the further east they go.

(*y*) By contrasting this situation to that which exists under a mill base system, where price competition prevails, will perhaps illustrate best the difference between a restraint of price competition under the Pittsburgh Plus system and free price competition under a mill base system.

(*z*) Under free competition, the Chicago mills would not share this high net return territory with the Pittsburgh and other eastern mills. They would keep this territory for themselves. As soon as they produced more than enough steel to satisfy the demands of that territory, they would lower their price to all their customers in order to keep distant mills out, and the more they lowered their price the more would they expand their territory. When they had lowered their price to the same level as the price of their competitors they would push their competitors to a line half way between their plants and their competitors' plants. (See Commission's Exhibit 6893, which shows the vastly increased territory of the Chicago mills with the complete elimination of Pittsburgh Plus.) As their cost of production became lower than that of their competitors, they would naturally extend their territory beyond the half way line and eventually, if their costs were sufficiently low, they would wipe their competitors off the map. All of their prices would be f. o. b. the mill and their prices would be the same, f. o. b. the mill, to all customers.

(*z–1*) Now to go back to the Pittsburgh Plus system: Instead of cutting their prices to shut their competitors out of their choicest Chicago territory, respondents allow their eastern competitors to share that territory, and they in turn dump their surpluses from their Chicago mills into their competitors' territory. They could not afford to do this unless they knew exactly what they were going to get for their steel in their competitors' territory, for they would not be able to determine whether the high prices in their Chicago territory and the lower prices in their competitors' territory would net them as much or more than if they sold all their steel f. o. b. the mill, and kept their competitors out of their territory. Under the Pittsburgh Plus system they are advised just what prices they will get in their competitors' territory because of the fact that their competitors all sell at the same Pittsburgh price plus the imaginary freight from Pittsburgh to destination. The moment, however, that their competitors do not carry out their part of the system by maintaining these Pittsburgh Plus prices, then the Chicago producers can no longer afford to share their choicest territory with their eastern competitors and at the same time to take cut prices for their

surpluses dumped into their competitors' territory. Therefore, when their eastern competitors do not maintain prices in the eastern territory, or in other words, when there is price competition, the Chicago mills protect themselves by putting on a mill base price at Chicago which is lower than the Pittsburgh Plus price, and thus effectively push their competitors out of their best territory. Thus have the economists testified, and thus has steel history borne them out as is clearly shown by other evidence in the case. In 1921, an eastern competitor of the Chicago mills in the sale of plates, bars and shapes started price competition. The western mills, as a result, put on Chicago base prices, and Chicago base prices still remain on those products. That competitor, however, did not manufacture sheets nor tin plate nor wire nor wire products, and price competition was not started on those articles and the Chicago base was not put on those products by the respondents nor their competitors, and the Pittsburgh Plus system still prevails in the Chicago district as well as everywhere else on those products. The Pittsburgh Plus system still prevails on plates, bars and shapes outside of the Chicago district, except to a limited extent in the Birmingham district, as will hereafter be developed.

(*z–2*) The Chicago mills produce much more than their territory under the Pittsburgh Plus system demands. There is no shortage in the Chicago territory which warrants Pittsburgh Plus prices in that section, nor are such Pittsburgh Plus prices determined by the free operation of the law of supply and demand.

(*z–3*) Through a period of years, a number of depressions in the steel industry forced the shutting down of the Chicago mills as well as the mills in other sections. This lack of demand and the consequent surplus of capacity did not affect the Pittsburgh Plus system, however, unless and until price competition happened to be started during any such depressed period. Periods when the mills outside of Pittsburgh were closed because of a lack of business did not cause the steel producers to abandon the Pittsburgh Plus practice. Price competition alone did that. The Pittsburgh Plus system prevailed alike in times of great demand and no demand at all, unless some mills started price cutting; if there was no price cutting, the Pittsburgh Plus system continued. Thus on sheets and tin plate and wire and wire products and plates, shapes and bars in 1919, when the year was a "terrible" one, as a witness for the respondents described it, Pittsburgh Plus continued throughout that period. In 1921, which was one of the worst years in steel history, Pittsburgh Plus prices prevailed on sheets, tin plate, wire and wire products throughout the country, though the surplus of sheets at one of the Chicago mills was so great that it sent large amounts to Japan at prices $13

per ton lower than it sold these same sheets to its customers in the United States. During such period all steel producers still maintained their Pittsburgh Plus prices in Chicago and elsewhere. Such prices were and are not determined by the free operation of supply and demand.

(*z–4*) Commission's Exhibit 6982 shows that during the years 1907 to 1921, the production of rolled steel products by the western mills fell and rose at the same times and in the same percentages with that of the eastern mills. In other words, when the Chicago mills were crowded for business, so were the Pittsburgh mills, and when the Pittsburgh mills slowed down because of a lack of business, so did the western mills. If the Chicago mills could not produce sufficient steel to care for western needs, their production would naturally not fall and rise substantially simultaneously with that of the eastern mills. This exhibit was prepared from figures furnished by respondents. Western mills are not more crowded at any time than the eastern mills as has been shown by the testimony of witnesses introduced both by the respondents and by the Commission. A shortage does not exist in the Chicago district, unless a similar shortage exists in the Pittsburgh district. The Chicago district is not dependent on the Pittsburgh district for any of said rolled steel products.

(*z–5*) The respondent, Carnegie Steel Company, does not sell in the territory of the respondent, Illinois Steel Company, except as to such products as are not manufactured by the western mills. If there existed a shortage in the Chicago territory and a surplus in the Pittsburgh district, it would naturally be expected that the respondent, Carnegie Steel Company, would assist in supplying that shortage, for it would receive just as much when selling its steel in the Chicago district as in Pittsburgh under the Pittsburgh Plus system. On the contrary, we find that the respondents, Illinois and Minnesota Steel companies, selling a very considerable portion of their products in foreign countries and in territory of their eastern competitors, where prices are lower than in their natural territory, which would naturally not be expected if there was a shortage in their own territories.

(*z–6*) Indeed, as respondents' own witness, a salesman who sold steel in the St. Louis district for both the respondents, Carnegie Steel Company and Illinois Steel Company, testified—in determining which of respondents was to fill an order he received—time of delivery was the thing which determined the placing of the order, and in the 12 years during which he served both companies in that district, there was not a single instance where the respondent, Carnegie Steel

Company had sold steel in that district because the respondent, Illinois Steel Company, had been unable to furnish it.

(*z–7*) No shortage exists at Chicago with a corresponding surplus at Pittsburgh.

(*z–8*) The respondent, Minnesota Steel Company, produces at Duluth a tonnage of steel bars that is overwhelmingly greater than the demand for those bars in that company's natural territory. Indeed, the mills of that company charged Pittsburgh Plus prices right up to the very day in February, 1921, when they had to close down because of no demand for their products. That company likewise disposes of its surplus product by dumping into territory where its net returns are very much less than its natural distributing territory under the Plus system.

(*z–9*) The capacity of the steel mills within a radius of 60 miles of Pittsburgh increased from 1908 to 1923, 6,000,000 tons, while the capacity of the steel mills within the same radius of Chicago increased only 3,000,000 tons. In other words, the mills in the Pittsburgh district increased their capacity twice as much as those in the Chicago district, notwithstanding the fact that the respondents' cost of production of steel in the Pittsburgh district is 20 per cent higher than in the Chicago district. As shown by these figures the shortage of steel production has been in the Pittsburgh district and the surplus, if any, has been in the Chicago district. Furthermore, the capacity of all the steel mills in the territory east of Chicago increased nearly 12,900,000 tons during the same period, while the capacity of all the steel mills in the territory west of, but including Chicago, increased but 4,607,000 tons. The capacity of the eastern mills, therefore, increased nearly three times as much as the western mills. As shown by these figures the shortage of steel production has been in the East, and the surplus, if any, has been in the West.

(*z–10*) Respondents introduced in evidence some figures comparing the percentages of increase in capacity of certain eastern mills with that of certain western mills from 1908 to 1923. Such figures are of little value inasmuch as the base figures from which the percentages are figured are greatly different.

(*z–11*) During the war Pittsburgh Plus was discontinued at Chicago on plates, shapes and bars, but just before the close of the war, it was put back at the suggestion of Judge Gary and one or two other steel producers, though at that time the Chicago mills were shipping practically 70 per cent of their products to the Atlantic coast. There was no question of a western shortage here. On the contrary, the western mills shipped most of their products East, yet Judge Gary and his associates were able to get the Pittsburgh Plus system rein-

stated in the Chicago district. (Immediately, all of the contract buyers of the said rolled steel products from respondents, Illinois Steel Company and Minnesota Steel Company had their contract prices automatically increased by the amount of Pittsburgh Plus.)

(*z–12*) The demand on the Chicago mills was never greater than in 1922 and 1923. As one of the respondents' witnesses, the vice-president of the Midvale Steel & Ordnance Company up to the time of the absorption of that company by the Bethlehem Steel Company, testified, 1922 was the only year when Chicago buyers had to go the Pittsburgh district to buy steel. Yet in this year, the Chicago mills did not charge Pittsburgh Plus prices on plates, bars and shapes, nor had they reinstated such prices on such products at the time the taking of testimony in this case had been completed.

(*z–13*) As one of respondents' own witnesses admitted, respondent's Gary mills are large surplus producers of blue annealed sheets. Such sheets are not made by respondents in the East in sufficient quantities to supply the Detroit and other eastern markets. These sheets produced at the Gary, Indiana, mills therefore are sent East to supply the shortage. Yet a Gary price plus actual freight is not charged on these sheets; Pittsburgh Plus is charged. Sheets are not even manufactured in the city of Pittsburgh. More sheets are manufactured in Ohio than Pennsylvania, yet prices are always Pittsburgh Plus.

(*z–14*) As Judge Gary testified, the law of supply and demand has not much influence on the establishing of the steel-basing price. Pittsburgh Plus prices are not determined by the free operation of supply and demand. This was borne out by Judge Gary in his testimony when he expressly stated that he had never claimed that the Pittsburgh Plus prices of the Chicago mills were due to the fact that those mills could not take care of the demand. On the contrary, as he repeatedly testified, the respondents' Pittsburgh Plus prices were charged because of the additional revenue they gave the respondents, and they would continue to be so charged until competition forced their elimination. As all of the economists likewise testified, the Pittsburgh Plus system could not coexist with price competition.

(*z–15*) The Pittsburgh Plus prices, as hereinabove shown, were enforced regardless of supply and demand conditions, as testified to by the vice president of respondent, American Steel & Wire Company. Price competition has been the only thing which has caused its temporary elimination during the brief intervals when it has been eliminated.

(*z–16*) Respondents introduced testimony purporting to show that practices similar to the Pittsburgh Plus system were used in other industries, but in none of them was the price system similar to that

of the Pittsburgh Plus system, where a product was sold on one basing point and the customers all over the country had to pay imaginary freight. As one of respondents' witnesses, a hay dealer, testified, he would have been put in jail had he attempted to charge his customers more than the actual freight on the hay he sold.

(*z–17*) There is nothing in the evidence which supports the contention that Pittsburgh Plus prices are made in good faith to meet competition, or are determined by the law of supply and demand. As all the economists have testified, the Pittsburgh Plus system of terraced prices is grotesque.

(*z–18*) Indeed, as Judge Gary has testified, the steel producers adopted the Pittsburgh basing point and the "one basing price" for "the 'orderly' conduct of the business," and as the former vice president of the respondent, Carnegie Steel Company, testified, the steel producers adopted the system to secure uniform prices among the steel producers, and to secure additional profits by way of the higher prices yielded under the Pittsburgh Plus system.

(*z–19*) As evidencing the arbitrary character of the Pittsburgh Plus prices, it is well to point out that pig iron, out of which steel is made, is not sold on the Pittsburgh Plus system, but is sold f. o. b. the various producing mills, though pig iron is produced in substantially the same percentages in the different states as steel. Judge Gary, as one of the steel advisers to the War Industries Board, suggested during the war that pig iron be put upon a single basing point as in the case of steel, but his suggestion was not adopted. Rails are sold by the steel mills on a strictly f. o. b. mill base. The Franklin Steel Company sells its concrete bars made of rerolled steel on a mill base and finds the plan works very satisfactorily.

(*z–20*) No interruption to business should be anticipated by the elimination of the Pittsburgh Plus system, for it was eliminated in the Chicago district in 1921 on plates, bars, and shapes. It was eliminated for a period of nine months during the war. It was eliminated in 1908 on plates, bars, and shapes at Birmingham. No interruption to business was noted in any of the cases where it was eliminated.

(*z–21*) Inasmuch as the Pittsburgh Plus system restrains price competition among the steel producers, as already shown, the figures of supply and demand introduced herein by respondents are valueless, for whatever results those figures show, they are due to the Pittsburgh Plus practice. In other words, as the economists all testified, the conditions of supply and demand are usually put forward as the justification for a certain action, when as a matter of fact they are the result of that action. And the respondents in this

case have attempted to set up the results of the Pittsburgh Plus practice as a justification for the practice. There are a number of other fatal objections to the figures submitted by respondents, but for the reason just given it is not necessary to consider the other objections here.

PAR. 15. *Respondents' practice of quoting and selling said steel products at Pittsburgh Plus prices and delivered prices as hereinabove set forth constitutes an unfair method of competition.*—Respondents' practice of quoting and selling their said steel products at Pittsburgh Plus prices and at delivered prices without disclosing to their customers how much they are charging for steel and how much for actual freight, is unfair to such customers and constitutes an unfair method of competition.

PAR. 16. *Respondents' practice of quoting and selling said steel products upon a basing point other than that of the producing or shipping point, constitutes an unfair method of competition.*

Respondents' systematic practice of quoting and selling said rolled steel products upon a basing point other than that of the producing or shipping point, is unfair to their customers who are discriminated against by such practice, and such practice constitutes an unfair method of competition.

PAR. 17. *Respondents' discriminations made under the Pittsburgh Plus system are not made for any of the purposes permitted by the Clayton Act.*—The discriminations made by respondents under the Pittsburgh Plus system in their prices covering said rolled steel products among their various customers as hereinabove mentioned, were and are not made because of differences in the grade, quality, or quantity of said rolled steel products; neither were or are they such discriminations as make only due allowances for differences in the cost of selling or transportation. Respondents' answer admits all of the foregoing except that they aver that such discriminations are made in good faith on account of the quantities furnished or to meet competition in the different localities and communities. However, no evidence was introduced by them to show that their discriminations under the Pittsburgh Plus system were in any wise due to quantities furnished, and as the evidence shows, such was not the case. Their findings have already pointed out that their discriminatory prices were and are not made in good faith to meet competition in the different localities and communities.

PAR. 18. *The Birmingham differential.*—On plates, bars and shapes sold by the respondent, Tennessee Coal, Iron & Railroad Company, hereinafter referred to as the "Tennessee Company," from its plants in or near the city of Birmingham, Ala., respondents charge different prices than those charged by their other mills

throughout the country. Except as hereinafter mentioned, they charge their customers $5 per ton above the Pittsburgh base price, which price is made f. o. b. Birmingham. An exception to this differential price practice is made in cases where the delivered price under the Birmingham differential exceeds at any point the delivered price under the Pittsburgh Plus system. In such cases, respondents adopt the Pittsburgh Plus system in selling their said rolled steel products.

(*a*) Prior and for some time subsequent to the acquisition of the said Tennessee Company by respondent, United States Steel Corporation in 1907, the said Tennessee Company sold its said products under the Pittsburgh Plus system. The customers of that company rebelled at paying such prices, however, and many of them refused to buy their requirements from said company, but bought the same from northern mills and paid to the railroad companies for actual freight what they would have had to pay the Tennessee Company by way of imaginary freight. While they saved nothing in so doing, they forced consideration of their complaints by the officials of the respondent companies. The Tennessee Company's sales manager was very much in favor of the elimination of the Pittsburgh Plus system on the Tennessee Company's products, and unsuccessfully appealed to Judge Gary first and later to W. E. Corey, chairman and president, respectively, of the respondent, Steel Corporation, for the abandonment of the practice, saying the Tennessee Company could not hope to expand its business unless the Pittsburgh Plus price system was abandoned. Yielding to the pressure brought by the customers finally, the Tennessee Company was permitted by respondent, Steel Corporation, to disregard the Pittsburgh Plus system in the sale of its products in certain territory. In lieu of Pittsburgh Plus prices, the company in about the year 1908 made a price f. o. b. Birmingham which was $3 per ton higher than respondents' Pittsburgh base price; this differential was increased in 1920 to $5 per ton above the Pittsburgh price where it still remains. The increase was made contemporaneously with a general increase in freight rates made at the time. The Birmingham differential applies in a limited territory, and the Pittsburgh Plus prices prevail in the balance of said respondents' selling territory.

(*b*) The respondent, American Steel & Wire Company, likewise has plants in or near Birmingham for the manufacture of its wire and wire products. That company, however, still charges Pittsburgh Plus on its products. That means that consumers in Birmingham pay $15.30 per ton more for such products than the consumers in Pittsburgh. The wire users in the South are very scarce, for as we have shown, it would be impossible for them to compete,

except in a very restricted territory, with the respondent, American Steel & Wire Company, in the manufacture and sale of the finished products made by that company under such a handicap. No concerted action by the southern wire users therefore could have much effect, as their purchasing power would be very limited. The respondent, American Steel & Wire Company, through its vice president and general manager of sales, stated in 1908, that if that company put in wire mills at Birmingham, it was not his idea that they should sell on a Birmingham basis, as this might result in giving the southern manufacturers an advantage over northern manufacturers at some of the northern points, " which of course, would not be advisable." And the said respondent company, following this advice, put on Pittsburgh Plus prices on its products at the time it built its mills at Birmingham, and has adhered to its Pittsburgh Plus prices ever since. The above statement of the respondents' wire company representatives illustrates the arbitrary nature and reason for Pittsburgh Plus prices, even when such prices run $15.30 per ton higher than their Pittsburgh prices. It must not be forgotten that the cost of producing steel in Birmingham, as shown by the evidence in the record, is much less than at Pittsburgh, yet the selling price of wire and wire products is amazingly more.

PAR. 19. *Respondents' Birmingham differential prices on plates, shapes, and bars substantially lessen competition among the steel users.*—As a result of the said discriminations against the customers of the respondent, Tennessee Company, such customers are very seriously handicapped. The effects of the discrimination are felt quite as severely as in the case of the western steel users for the reason that the consuming markets in the South are very limited, and were it not for the differential, these markets would be very greatly enlarged into large consuming territories. The freight rates are lower in the South than elsewhere. The abolition of the differential therefore would enable the southern steel users to use the amount of the differential in carrying their products under these cheaper freight rates to distant markets which they can not possibly reach after paying the differential in competition with their northern competitors who do not have to pay it. These distant markets in most cases are better markets than the market to which these southern steel users are confined because of the differential.

(*a*) As the president of respondent Steel Corporation testified in 1913, a discrimination of 11 cents per hundred weight, or $2.20 per ton, against a manufacturer at Buffalo would confine that manufacturer to his home town; he could not distribute his products outside of that town as against the competition of his competitors in favor of whom the discrimination operated. The Birmingham ter-

ritory steel users who are discriminated against under the Birmingham differential to the extent of 25 cents per hundred pounds, or $5 per ton, are manifestly very seriously hampered. Large numbers and tiers of States are taken away from the distributing territory of the southern steel users, who otherwise would be able to market their products in such territory if the differential were removed. This only assumes the removal of the differential. It does not even assume a lower base price at Birmingham than at Pittsburgh, which might be exepected because the costs of production are so much lower at Birmingham than at Pittsburgh, as heretofore mentioned. If the base price at Birmingham were lower than the Pittsburgh base price by the extent of the lesser cost of production at Birmingham, the southern steel user's territory would be extended very much beyond the halfway point between Birmingham and Pittsburgh, whereas, now the line is drawn a few miles north of the plants of the southern steel users. With the differential eliminated, the capacity and production of the plants of the southern steel users would be very materially increased. The Birmingham differential amounts to from 4 per cent to 12 per cent of the selling price of the various products manufactured by the southern steel users. All of them complain because of their inability to grow under the handicap; all of them remonstrate because their northern competitors take away a very substantial part of what would be their natural territory if the differential were removed; all of them are bitter because of the restriction caused in their volume of business, the resulting higher overhead cost per unit of product, and the necessity of increasing the price of their products. As in the case of the western steel users, such higher prices cause a further restriction in the volume of business done by them, another resulting higher overhead, and so on, ad infinitum. To recite their troubles under the differential would be to repeat what the Pittsburgh Plus system has done and is doing to the steel users of the West and to the wire users of the South when competing against their competitors to the east and north of them, respectively. New Orleans' steel-using shops are stagnating, whereas, if they were permitted to buy steel without the differential, they would be able to materially increase their business. Chattanooga and Birmingham and other southern steel users want to do larger and more profitable work, but can not secure it as against their competitors favored by the differential system. Their competition in certain lines is destroyed by the differential.

(*b*) The testimony of a large number of southern witnesses showing a very substantial lessening of their competition in interstate commerce, due to the Birmingham differential prices, and the de-

struction of their competition in certain products, remains undisputed in the record.

PAR. 20. *Respondents' practice of quoting and selling plates, shapes and bars at Birmingham differential and Pittsburgh Plus prices in the South constitutes an unfair method of competition.*—The system of quoting and selling plates, bars and shapes at Birmingham differential and Pittsburgh Plus prices by the respondent, Tennessee Coal, Iron & Railroad Company, or other respondents, is unfair to respondents' customers who are discriminated against by such practice and such system constitutes an unfair method of competition.

PAR. 21. *Respondents' discriminatory or Birmingham differential prices on plates, bars and shapes substantially lessen competition of their steel customers with respondents.*—As in the case of the Pittsburgh Plus system, the evidence shows that the respondent, United States Steel Corporation, through its subsidiary, the respondent, American Bridge Company, has the same decided advantage in the South when competing with the Bridge company's southern competitors on bridges, buildings, boats and barges that it has in the West. All of the southern competitors of the Bridge company who testified in this case were subjected to disadvantages similar to those under which the western steel users labored, so that it is unnecessary to repeat those disadvantages here. In the case of a Birmingham tank manufacturer, the differential amounted to 12 per cent of his selling price. He, too, found that when his competitor, the respondent, American Bridge Company, wanted a job, it got it. In the case of a $75,000 job which had been promised this Birmingham competitor, the respondent, American Bridge Company got the job away from him because of an overnight change of specifications in the roofing material which made the job cost less, but which roofing material the Birmingham competitor was not able to purchase from any steel producer, including respondents, but which roofing material the respondent American Bridge Company was able to get.

The advantage which the respondent, American Steel & Wire Company, possesses because of the very high Pittsburgh Plus prices charged by its Birmingham plants to its wire customers, has already been mentioned.

PAR. 22. *Respondents' practice of quoting and selling their plates, bars and shapes at Birmingham differential prices to their customer-competitors constitutes an unfair method of competition.*—The practice of certain respondents of quoting and selling said steel products at Birmingham differential prices to their customers with whom they or other respondents compete, as hereinabove set

forth, is unfair to such customers and gives the respondents an unconscionable advantage over such customer-competitors, and constitutes an unfair method of competition against such customer-competitors.

PAR. 23. *Respondents' Birmingham differential and Pittsburgh Plus combination prices on plates, shapes and bars substantially lessen competition among the steel products.*—As has been shown, respondents' southern mills charge the Pittsburgh Plus prices on plates, shapes and bars in certain territory, and the Birmingham differential in territory nearer Birmingham, while they charge Pittsburgh Plus prices on sheets and wire and wire products throughout the southern territory. The findings have covered at great length the methods by which these Pittsburgh Plus prices are made and have shown that such prices inevitably destroy price competition among the steel producers.

PAR. 24. *Respondents' Birmingham differential and Pittsburgh Plus combination prices on plates, shapes and bars adversely affect the public interest.*—The adverse effect of the Pittsburgh Plus system on the public interest has been set forth at length. Similar adverse effect results from the use of the Birmingham differential. The cost of producing steel at Birmingham is approximately 21 per cent less than at Pittsburgh, yet the price at which respondents sell their products at Birmingham is much higher. Indeed, as shown by Commission's Exhibit 6853, the spread between the cost of producing bars and the selling price of bars is only $2.10 at Pittsburgh, while at Birmingham it is $8. Respondents impliedly threaten to return to the Pittsburgh Plus system in selling bars, plates and shapes in the Birmingham district by their answer herein which alleges that the Birmingham differential is but a "temporary" concession from the Pittsburgh Plus prices formerly charged. If they do return to the Pittsburgh Plus prices, the spread between the cost and selling prices of bars at Birmingham will be $18.30 as against $2.10 at Pittsburgh. Indeed, it must be assumed that this additional price of $16.20 per ton which the Birmingham public must pay is charged on wire and wire products, for on these products Pittsburgh Plus prices are still charged. The great public interest in a matter where that public is charged a profit at Birmingham which exceeds the profit at Pittsburgh by $16.20 per ton is manifest.

(*a*) As in the case of the Pittsburgh Plus prices, the steel producing and the steel consuming industries in the South are greatly hampered by the higher prices charged for steel there as against the prices charged in the North to the Pittsburgh and other eastern consumers. Respondents' answer herein avers that the Birmingham

differential prices on plates, shapes and bars were made in the South in order to furnish an additional market for the company's products by making it possible for the steel users to develop their industries. For the same reason, as the evidence shows, the elimination of this very serious discrimination of $5 per ton would greatly increase the steel producing industry in the South; the steel-users' industries would increase extensively and intensively—extensively, by annexing much more territory as already shown, and intensively, through the greater use of steel by the lessening of its cost. Northern boiler manufacturers, for instance, get two-thirds of the boiler business in the South because of the Birmingham differential. This increases the demand for steel in the North very materially and to the same extent lessens such demand in the South. At the same time, the plants of the southern steel users are kept working at small capacity, while those of the North have a vast amount of business which would go to southern plants if the differential were removed.

(*b*) These matters have been brought out before in the case of the Pittsburgh Plus prices. The public, however, is as severely affected by the Birmingham differential prices as it is by the Pittsburgh Plus prices. The Birmingham differential and Pittsburgh Plus prices charged by respondents' southern mills delay and prevent the modernizing of the steel producing plants of respondents' principal competitor in the South and tend to perpetuate the antiquated steel plants of said competitor and resulting higher steel costs to the public.

PAR. 25. *Respondents' discriminatory Birmingham differential and Pittsburgh Plus combination prices on plates, shapes, and bars are not made in good faith to meet competition.*—There is no shortage of steel production of the said products in the South which can be and is supplied by surplus producing mills elsewhere. The steel production in the South is very much greater than the steel consumption in that territory. Respondents' southern mills dump approximately half of their production outside of their highest net return territory, which of itself indicates the tremendous surplus produced by respondents' mills alone in the South. The testimony of a southern competitor of respondents' Birmingham mills, and a witness for respondents, showed that the production of the southern mills was so great that the southern demand did not equal one-third of the production. As the president of the respondent, Tennessee Company, testified in 1913, in the steel dissolution suit already referred to, the greatest disadvantage of the southern mills is the limited consumption in their territory. As in the case of Duluth where the production of steel is overwhelmingly greater than the demand in

that territory, so in the South is the production overwhelmingly greater than the demand in the natural territory of the southern mills under the Birmingham differential. Respondents arbitrarily limit their territory by the addition of $5 to their prices over the Pittsburgh prices. They permit other mills to share a great amount of territory in which they would have the advantage if they charged at Birmingham no more than they charge at Pittsburgh. They do just as is done in the case of the Pittsburgh Plus prices. They permit their competitors to share their natural territory, and in so doing they dump their surplus production created by such action into other territory at lower prices, and the public at Birmingham must pay higher prices for its steel because respondents take lower prices in the dumping territory. In this dumping territory, there is the absence of price competition, for this dumping territory is where the Pittsburgh Plus prices prevail. If price competition existed between the southern and northern mills, the southern mills would do as the economists testified they would do and as is done by the western mills when competition appears. They would reduce their base price at Birmingham, making the same base price to all customers of their Birmingham mills. They would consequently enlarge their territory and keep their neighboring competitors out of such enlarged territory just as their neighboring competitors keep them out of the latter's territory. But under the system which prevails, there is an absence of price competition for the same reasons as in the case of the Pittsburgh Plus prices.

(*a*) The same condition holds true with reference to respondents' Pittsburgh Plus prices on wire and wire products in the South. The evidence shows conclusively a great surplus production of these products in the South. The prices on these products are not made in good faith to meet competition, but as in the case of all other Pittsburgh Plus prices, and as in the case of the Birmingham differential and Pittsburgh Plus combination prices on plates, shapes and bars they are made to restrain price competition and as has been shown, they destroy such competition.

PAR. 26. *Respondents' Birmingham differential and Pittsburgh Plus combination prices are not made for any of the purposes permitted by the Clayton Act.*—As in the case of respondents' Pittsburgh Plus prices, the Tennessee Company's Birmingham differential prices in certain territory and its Pittsburgh Plus prices in other territory in the South on plates, shapes and bars, were and are not made because of differences in the grade, quality or quantity of said rolled steel products; neither were nor are they such discriminations as make only due allowance for differences in the cost of selling or transportation. Respondents have not contended

otherwise. And as the findings have shown, such prices are not made in good faith to meet competition. The same holds true with reference to the Pittsburgh Plus prices charged by respondents' Birmingham mills on wire and wire products, as hereinabove noted.

PAR. 27. No findings are made with respect to the charges contained in the complaint herein against the respondents National Tube Company, Clairton Steel Company, Union Steel Company and the Lovain Steel Company for the reason that the record does not contain sufficient evidence with reference to such charges to justify findings.

CONCLUSION.

The respondents, United States Steel Corporation, American Bridge Company, American Sheet & Tin Plate Company, Carnegie Steel Company, American Steel & Wire Company, Illinois Steel Company, Minnesota Steel Company, and Tennessee Coal, Iron & Railroad Company, by reason of the facts set out in the foregoing findings, have been and are—

1. Using unfair methods of competition in commerce, in violation of the provisions contained in Section 5 of an Act of Congress entitled "An Act to create a Federal Trade Commission, to define its powers and duties, and for other purposes," approved September 26, 1914; and

2. Discriminating in price between the different purchasers of their plates, shapes, bars, sheets, tin plate, wire and wire products, all of which are rolled steel products, in violation of the provisions contained in Section 2 of an Act of Congress entitled "An Act to supplement existing laws against unlawful restraints and monopolies, and for other purposes," approved October 15, 1914.

ORDER TO CEASE AND DESIST.

This proceeding having been heard by the Federal Trade Commission upon the second amended complaint of the Commission, the amended answer of respondents, the testimony and documentary evidence offered and received and the arguments of counsel for the respective parties herein, and the Commission having made its findings as to the facts and its conclusions that the respondents have violated the provisions of an Act of Congress approved September 26, 1914, entitled "An Act To create a Federal Trade Commission, to define its powers and duties, and for other purposes," and also the provisions of an Act of Congress approved October 15, 1914, entitled "An Act To supplement existing laws against unlawful restraints and monopolies, and for other purposes," therefore,

It is now ordered, That respondent, United States Steel Corporation—through its respondent subsidiaries, American Bridge Company, American Sheet & Tin Plate Company, Carnegie Steel Company, American Steel & Wire Company, Illinios Steel Company, Minnesota Steel Company and Tennessee Coal, Iron & Railroad Company—and said respondent subsidiaries, and each and all of said respondents, their officers, directors, agents, representatives, and employees, cease and desist—

1. From quoting for sale or selling in the course of interstate commerce their rolled steel products known as plates, bars, structural shapes, sheets, tin plate, wire and wire products at Pittsburgh Plus prices. (By quoting for sale or selling at Pittsburgh Plus prices is meant respondents' systematic practice of quoting and selling said products manufactured at and shipped from points outside of Pittsburgh at their f. o. b. Pittsburgh prices plus amounts equivalent to what the railroad freight charges on such products would be from Pittsburgh to each different destination if such products were actually shipped from Pittsburgh.)

2. From quoting for sale or selling in the course of interstate commerce their said rolled steel products upon any other basing point than that where the products are manufactured or from which they are shipped.

3. From selling or contracting for the sale of or invoicing such steel products in the course of interstate commerce without clearly and distinctly indicating in such sales, or upon such contracts or invoices, how much is charged for such steel products f. o. b. the producing or shipping point, and how much is charged for the actual transportation of said products, if any, from such producing or shipping point to destination.

4. From discriminating in the course of interstate commerce, either directly or indirectly, in price between different purchasers of their rolled steel products known as plates, bars, structural shapes, sheets, tin plate, wire and wire products sold for use, consumption or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, where the effect of such discrimination may be to substantially lessen competition in any line of interstate commerce, including competition among the steel producers, or steel users, or both; provided, however, that nothing herein contained shall prevent discrimination in price between purchasers of said products on account of differences in the grade, quality or quantity of the commodity sold, or that makes only due allowance for difference in the cost of selling or transportation, or discrimination in price in the same or different communities made in

good faith to meet competition. The use by respondents in the course of such interstate commerce of the system of Pittsburgh Plus prices for their said steel products, manufactured at and shipped from points outside of Pittsburgh—which prices are their f. o. b. Pittsburgh prices plus amounts equivalent to what the railroad freight charges on such products would be from Pittsburgh to each different destination if such products were actually shipped from Pittsburgh—shall be deemed to constitute a violation of this order. The use by respondents in the course of such interstate commerce of any system similar to that of the Pittsburgh Plus system shall likewise be deemed to constitute a violation of this order. The practice by respondents of selling or contracting for the sale of said products in the course of interstate commerce upon any other basing point than that where the products are manufactured or from which they are shipped, shall be deemed to constitute a violation of this order.

It is further ordered, That the said respondents, within sixty days from and after the date of the service upon them of this order, shall file with the Commission a report or reports in writing setting forth in detail the manner and form in which they are complying and have complied with the order to cease and desist hereinabove set forth.

It is further ordered, That the charges in the complaint herein as against the respondents, National Tube Company, Clairton Steel Company, Union Steel Company and The Lorain Steel Company, be, and the same are, hereby dismissed.

Commissioner Gaskill dissenting in attached memorandum.

95009 O—58—pt. 4——8

Dissent.

Dissent by Commissioner Gaskill.

I find myself unable to concur in the majority conclusion that the powers of the Commission include a remedy for the practices complained of. The significance of the Commission's decision is so important and the implications of the order are so extensive that a statement of the basis of my dissent seems to be justified.

The United States Steel Corporation is a legal entity. It owns a number of manufacturing plants located in various parts of the United States at which it produces, among other steel products, those which are the subjects of the present inquiry, viz, plates, shapes and bars. The policy of the Corporation is to sell plates, shapes and bars only on a delivered basis. These products irrespective of the place of manufacture, are valued as though they were at Pittsburgh, and this uniform valuation of the products of the separate plants constitutes the "Pittsburgh Base."

The corporation does not sell at the Pittsburgh base price. It quotes prices at Pittsburgh base plus freight to the point of consumption. This is "Pittsburgh Plus." The actual selling price, however, involves another element. The mill from which delivery is made invoices the customer at Pittsburgh Plus less the actual freight to the point of consumption. What is added to Pittsburgh base to make the selling price is not the actual transportation charge nor a theoretical freight charge from Pittsburgh to the place of consumption, but is the difference between them.

Plates, shapes and bars are the raw materials of a subsequent industry. With them the fabricator commences. Through its subsidiaries the Steel Corporation is engaged on this plane also. The transfer of raw materials to these units of its organization is not governed by the requirements of Pittsburgh Plus. These fabricating units start with the advantage over their rivals in the elimination of the freight rate from Pittsburgh to the point of fabrication in their favor. Their rivals accumulate an additional freight rate in any eastward movement of finished products, if the point of fabrication be west of Pittsburgh. The subsidiaries of the Steel Corporation have also the advantage in a western movement of finished products in that a single long-haul rate on the fabricated products is almost universally less than the sum of the two short-haul rates required of competitors in bringing in raw materials on Pittsburgh Plus and moving out finished products at the actual rate to the point of consumption.

The argument is made that there are manifestations both in the field of steel production and its fabrication, which indicate the op-

eration of other than competitive forces and that the impelling cause or the protective agency through which that cause operates, is Pittsburgh Plus. It is contended that—

1. The United States Steel Corporation is the dominant factor in the steel industry of the United States and that through Pittsburgh Plus.

2. Its subsidiary companies enjoy controlling advantages over their competitors in the matter of prime cost of raw materials and delivered cost of finished products.

3. The normal development of the steel industry in respect of location has been retarded and that industry unduly concentrated.

4. The development of a properly disseminated fabricating industry has been very seriously obstructed if not reduced to a permissive basis.

5. The uneven development of the steel industry and that of its fabrication works a grave hardship to many sections of the country.

The evidentiary support of these propositions is not to be lightly disregarded and I am not to be understood as having decided adversely to them. But if we conclude that these propositions are well founded the question yet remains whether these manifestations qualify the forces of causation as unlawful and bring those causes within the scope of the Commission's corrective powers.

The law does not require absolute freedom of competition. Nor does the law enjoin the observance of sound economic principles. The Federal Trade Commission has not been given a mandate to establish any more the one than the other. It has to do solely with the legal concept of competitive requirements however short that may be of the true standard. And if the laws permit the use of unsound economic principles, it seems that this tolerance is the act of the body of citizens themselves and must continue until a clearer understanding is demonstrated in terms of a legislative declaration.

The existence of the Steel Corporation, the scope of its operations, the power which it exerts, its actual or potential influence, has received legal sanction. The necessary consequences of its being and the natural results of its operation, must be accepted also. It may without violation of any law of which I am aware, put the same price on all its products and base this price at one specific place if it so desires. In the sight of the law it is as though there was but one plant and its products. The Pittsburgh base then is the exercise of a privilege which naturally and necessarily follows from the grant of power to combine the ownership of several plants.

As has been pointed out, while the Steel Corporation quotes at Pittsburg plus freight to point of consumption, it does not sell at that price but deducts the actual freight charge involved in the movement. It is argued that this practice is unlawful because (*a*) a resulting price discrimination which substantially lessens competition in steel fabrication is necessarily involved, which is not justifiable as a difference in transportation cost, and (*b*) the refusal to sell f. o. b. the mill nearest the point of consumption with or without the actual freight charge results in a suppression of competition both in the production and fabrication of steel and tends to monopoly.

Freight rates unquestionably create an area of preference with relation to a point of production. While this area of preference is extended as several points of production are combined under one ownership, the resulting preference which is lawful in the one instance is not made unlawful by its greater extent in the second instance. What are preferences from one point of view are discriminations to the opposite observer. But it must be obvious that a preference or a discrimination to be unlawful must be something more than the natural and necessary implications of lawful advantage.

It is suggested that the evil lies in the suppression of knowledge of the actual selling price under cover of the Pittsburgh Plus quotation and that if this cover were removed, the discrimination would be apparent. That is to argue that the illegality of the practice arises only with the consciousness of its use. Whereas the practice must be continuously expressing its results even though those affected are ignorant of the cause. And these results speak for themselves.

There is no law of which I am aware which requires a manufacturer to sell f. o. b. if he prefers to sell c. i. f. that is, to sell at the place of manufacture instead of delivering at his customer's warehouse. Or to sell from or at any particular mill. I am unable to find in law a warrant for holding that a delivered price policy is made unlawful because of the method used to calculate the selling price. And the results of this policy seem to me to be such as naturally and necessarily attend the antecedent legalized status. This being so it simply means that these manifestations which are urged as indicative of unlawful action, are outside the law, not that the causes which produce them are unlawful.

That satisfaction of the legal requirements may be deemed to fall short of economic justification does not increase this Commission's powers nor enlarge its duties. Economists of established reputation believe that the selling policy presently under consideration is capable of producing in kind practically all of the effects which this

record illustrates. In the present instance it seems these effects are magnified by the dominance and strategic position of the respondent in steel production, by the fact that the product of the steel industry is the raw material of a subsequent industry, and that the respondent is engaged in both phases. Given the necessary quantity values in causation, it seems to be the economist's view that such effects as are here presented are inherent in the economic policy which is being used.

If the applicants' contention is sound there is no effective remedy short of a mill base for each unit of the respondent's organization and either f. o. b. sales or delivered sales from the nearest mill at the f. o. b. price plus actual freight. And it would require the same rule to be applied to transfers of material to subsidiaries as govern sales to independents. Naturally such a rule would have equal application to every other industry in the United States now using the uniform price delivered sales plan in interstate commerce.

I do not believe that this Commission can require the abandonment of the delivered sale price on a single base for the products of several mills under a single ownership, any more than it could require the owner of a single plant to give over the uniform delivered price on its single product. Nor by parity of reasoning could it compel the respondent to treat its units as separate plants and sell f. o. b. each mill. The negative definition of the Commission's jurisdiction in the case of *Warren, Jones and Gratz* v. *Federal Trade Commission* 253 U. S. 421, seems to preclude such a possibility. This body must take the law as it is received from the hands of Congress and interpreted by the courts for whose supervision Congress made precise provision. The grant of power to this Commission however broad it may be in some aspects, does not extend to the correction of what in its discretion, the Commission may believe to be an economic mistake. If there is to be a remedy of effects whose cause is beyond the law, if there is to be so profound a change in the established business practices as is here contended for, that responsibility lies upon the Congress because it alone has the power so to mould the common concept of public policy.

The suggestion that if this view be applied grave abuses may arise from the mistakes or wrongful exertion by the legislative department of its authority, but intimates that if the legislative power be permitted its full sway within its constitutional sphere harm and wrong will follow and therefore it behooves the judiciary to apply a corrective by exceeding its own authority. But as was pointed out in *Cary* v. *Curtis* (3 How. 236) and as has been often since emphasized by this court (*McCray* v. *United States* 195 U. S. 27) the proposition but mistakenly assumes that the courts can alone be safely intrusted with power and that hence it is their duty to unlawfully exercise

prerogatives which they have no right to exert, upon the assumption that wrong must be done to prevent wrong being accomplished. *Oceanic Navigation Company* v. *Stranahan*, 214 U. S. 320.

Moreover it seems to me that the effort to apply a remedy through the Federal Trade Commission act confuses the issue. If the economists are right, the requirements of the situation will be met only by a legislative recognition of the necessity for a more exact statement of the scientific relation between business and economics and the declaration of that relation in the form of a law of general application.

For these reasons I am unable to assent to the issue of the proposed order.

In the
UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

UNITED STATES STEEL CORPORATION, AMERICAN BRIDGE COMPANY, CARNEGIE-ILLINOIS STEEL CORPORATION (formerly known as Carnegie Steel Company and Successor by Merger to American Sheet & Tin Plate Company), THE AMERICAN STEEL AND WIRE COMPANY OF NEW JERSEY, and TENNESSEE COAL, IRON AND RAILROAD COMPANY,	)	No. 6796
	)	March Term,
	)	1938
Petitioners,	)	
v.	)	
FEDERAL TRADE COMMISSION,	)	
Respondent.	)	

Present: Maris, McLaughlin and O'Connell, JJ.

DECREE OF AFFIRMANCE AND ENFORCEMENT OF THE FEDERAL TRADE COMMISSION'S ORDER TO CEASE AND DESIST.

The petitioners in the above designated case having filed in this Court on May 18, 1938 their petition to review and set aside an order to cease and desist entered against them by respondent Federal Trade Commission on July 21, 1924, petitioners having filed with the Commission on September 17, 1924 a report stating their intention of complying with said order "in so far as it is practicable to do so," respondent Commission having filed a cross-petition for enforcement of its order on October 4, 1944, petitioners no longer contending that said order should be set aside in its entirety and having publicly announced in July, 1948 a method of pricing steel products that does not conflict with the requirements of the order, briefs for petitioners and respondent having been filed and the case now being ready for submission to the Court on its merits and both petitioners and respondent

having expressed their consent to the entry of this decree of affirmance and enforcement by a stipulation filed in this Court;

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED by this Court that the order to cease and desist entered by respondent herein against petitioners on July 21, 1924, be and it is hereby affirmed, and petitioners are hereby commanded to comply with and to obey the said order to cease and desist, the terms and text of which are here set forth as follows:

> This proceeding having been heard by the Federal Trade Commission upon the second amended complaint of the Commission, the amended answer of respondents, the testimony and documentary evidence offered and received and the arguments of counsel for the respective parties herein, and the Commission having made its findings as to the facts and its conclusions that the respondents have violated the provisions of an Act of Congress approved September 26, 1914, entitled "An Act To Create a Federal Trade Commission, to define its powers and duties, and for other purposes," and also the provisions of an Act of Congress approved October 15, 1914, entitled "An Act To Supplement existing laws against unlawful restraints and monopolies, and for other purposes," therefore,
>
> It is now ordered, That respondent, United States Steel Corporation - through its respondent subsidiaries, American Bridge Company, American Sheet & Tin Plate Company, Carnegie Steel Company, American Steel & Wire Company, Illinois Steel Company, Minnesota Steel Company and Tennessee Coal, Iron & Railroad Company - and said respondent subsidiaries, and each and all of said respondents, their officers, directors, agents, representatives, and employees, cease and desist -
>
> 1. From quoting for sale or selling in the course of interstate commerce their rolled steel products known as plates, bars, structural shapes, sheets, tin plate, wire and wire products at Pittsburgh Plus prices. (By quoting for sale or selling at Pittsburgh Plus prices is meant respondents' systematic practice of quoting and selling said products manufactured at and shipped from points outside of Pittsburgh at their f.o.b. Pittsburgh prices plus amounts equivalent to what the railroad freight charges on such

products would be from Pittsburgh to each different destination if such products were actually shipped from Pittsburgh.)

2. From quoting for sale or selling in the course of interstate commerce their said rolled steel products upon any other basing point than that where the products are manufactured or from which they are shipped.

3. From selling or contracting for the sale of or invoicing such steel products in the course of interstate commerce without clearly and distinctly indicating in such sales, or upon such contracts or invoices, how much is charged for such steel products f.o.b. the producing or shipping point, and how much is charged for the actual transportation of said products, if any, from such producing or shipping point to destination.

4. From discriminating in the course of interstate commerce, either directly or indirectly, in price between different purchasers of their rolled steel products known as plates, bars, structural shapes, sheets, tin plate, wire and wire products sold for use, consumption or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, where the effect of such discrimination may be to substantially lessen competition in any line of interstate commerce, including competition among the steel producers, or steel users, or both; provided, however, that nothing herein contained shall prevent discrimination in price between purchasers of said products on account of differences in the grade, quality or quantity of the commodity sold, or that makes only due allowance for difference in the cost of selling or transportation, or discrimination in price in the same or different communities made in good faith to meet competition. The use by respondents in the course of such interstate commerce of the system of Pittsburgh Plus prices for their said steel products, manufactured at and shipped from points outside of Pittsburgh - which prices are their f.o.b. Pittsburgh prices plus amounts equivalent to what the railroad freight charges on such products would be from Pittsburgh to each different destination if such products were actually shipped from Pittsburgh - shall be deemed to constitute a violation of this order. The use by respondents in the course of such interstate commerce of any system similar to that of the

Pittsburgh Plus system shall likewise be deemed to constitute a violation of this order. The practice by respondents of selling or contracting for the sale of said products in the course of interstate commerce upon any other basing point than that where the products are manufactured or from which they are shipped, shall be deemed to constitute a violation of this order.

It is further ordered, That the said respondents, within sixty days from and after the date of the service upon them of this order, shall file with the Commission a report or reports in writing setting forth in detail the manner and form in which they are complying and have complied with the order to cease and desist hereinabove set forth.

It is further ordered, That the charges in the complaint herein as against the respondents National Tube Company, Clairton Steel Company, Union Steel Company and The Lorain Steel Company, be, and the same are, hereby dismissed.

IT IS HEREBY FURTHER ORDERED, ADJUDGED AND DECREED by this Court that the petitioners herein shall have a period of sixty days from and after the date of this decree within which to file with the Federal Trade Commission their report in writing setting forth in detail as provided by said order the manner and form in which they have complied with said order to cease and desist.

AND IT IS HEREBY FURTHER ORDERED, ADJUDGED AND DECREED that this Court retain and it does hereby retain, jurisdiction of this proceeding to the extent necessary to compel obedience to said order to cease and desist or to make or allow to be made any such modification thereof as may hereafter be necessary or expedient, but without prejudice to the right of the Federal Trade Commission to initiate such contempt proceedings or other proceedings for the enforcement of said order as may be warranted by law, and without prejudice to the rights of the petitioners and each of them at any time or from time to time hereafter to make applications in this Court or before the Federal Trade

Commission for such amendments or modifications of said order or of this decree as may be warranted by law.

By the Court.

ALBERT B. MARIS

United States Circuit Judges

October 5, 1948

A true copy.

/s/ Ida O. Creskoff

Clerk

UNITED STATES OF AMERICA

BEFORE FEDERAL TRADE COMMISSION

Docket No. 5508

In the Matter of American Iron & Steel Institute, an incorporated trade association, its directors, officers and members; and United States Steel Corporation and certain of its subsidiaries, Bethlehem Steel Corporation and certain of its subsidiaries, Republic Steel Corporation and certain of its subsidiaries, Youngstown Sheet & Tube Company and one of its subsidiaries, Jones & Laughlin Steel Corporation, American Rolling Mill Company, National Steel Corporation and certain of its subsidiaries, Inland Steel Company and one of its subsidiaries, and Wheeling Steel Corporation, corporations, individually and as representatives of all of the members of respondent American Iron & Steel Institute.

COMPLAINT

Pursuant to the provisions of an Act of Congress entitled, "An Act to Create a Federal Trade Commission, to define its powers and duties, and for other purposes," approved September 26, 1914, and commonly known as the Federal Trade Commission Act, the Commission having reason to believe that the respondents herein named have violated the said Act of Congress, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, the Commission hereby issues its complaint stating its charges in that respect as follows:

THE PARTIES RESPONDENT

PARAGRAPH ONE. The members of respondent American Iron and Steel Institute consist of more than 100 corporations, individuals, firms, and partnerships, their number varying from time to time by the separation of some and the addition of others, so that it is impracticable at any given time to name specifically as a respondent each and every member without manifest delay and inconvenience. However, the Commission names and includes as respondents in this proceeding the American Iron and Steel Institute and its members. The said American Iron and Steel Institute, sometimes hereinafter referred to as the Institute, is hereby made a respondent, both separately and as a representative of all of its producing members; hereby also made respondents are the Institute's officers, both separately and as representatives of all the producing members thereof; the members of its Board of Directors, both separately and as representatives of all the Institute's producing members, and the following members of said Institute, both separately and as representatives of the other producing members of said Institute: United States Steel Corporation and its producting subsidiaries, American Steel and Wire Co., American Bridge Co., Carnegie-Illinois Steel Corporation, Columbia Steel Co., National Tube Co., and Tennessee Coal, Iron & Railroad Co., American Sheet and Tin Plate Co., subsidiary of Carnegie-Illinois Steel Corporation, and Virginia Bridge Co., subsidiary of Tennessee Coal, Iron & Railroad Co.; Bethlehem Steel Corporation and its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Co. of Pennsylvania and Bethlehem Steel Company of Delaware; Republic Steel Corporation and its subsidiaries, Truscon Steel Co. and Fretz-Moon Tube Co., Inc.; Jones & Laughlin Steel Corporation; Youngstown Sheet & Tube Company and its subsidiary, Youngstown Metal Products Co.; American Rolling Mill Co.; National Steel Corporation and its subsidiaries, Weirton Steel Co. and Great Lakes Steel Corp.; Inland Steel Co. and its subsidiary, Milcor Steel Co.; and Sheeling Steel Corporation.

The production and sales of the concerns specifically named herein as respondents represent in the aggregate a very large majority of the entire output of the iron and steel industry, and the membership of respondent Institute includes practically all the producers of steel ingots in the United States.

ORGANIZATION AND DESCRIPTION OF PARTIES RESPONDENT

PARAGRAPH TWO. Respondent American Iron and Steel Institute is a nonprofit association or organization with its principal place of business at 350 Fifth Avenue, New York, N. Y., and its membership includes all the important iron and steel producers.

Respondent United States Steel Corporation is a corporation organized and existing under the laws of the State of New Jersey, with its office and prin-

cipal place of business located at 71 Broadway, New York, N. Y. It holds practically all the capital stock and controls the general policy of a large number of subsidiary corporations, including American Steel and Wire Co., 448 Rockefeller Bldg., Cleveland, Ohio, American Bridge Co., Frick Building, Pittsburgh, Pa., Carnegie-Illinois Steel Corp., Carnegie Bldg., Pittsburgh, Pa., Columbia Steel Co., Russ Bldg., San Francisco, Calif., National Tube Co., Frick Bldg., Pittsburgh, Pa., and Tennessee Coal, Iron and Railroad Co., 20th St. at 1st Ave. North, Birmingham, Ala. Carnegie-Illinois Steel Corp. controls American Sheet & Tin Plate Co., Carnegie Bldg., Pittsburgh, Pa., and Tennessee Coal, Iron and Railroad Co. Controls Virginia Bridge Co., Roanoke, Va. Each of the subsidiary corporations thus controlled has acted and is continuing to act for and on the behalf of the United States Steel Corporation in committing acts and performing things, as hereinafter alleged and set forth in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

United States Steel Corporation and its respondent-subsidiaries control the major part of the total production of certain kinds of rolled steel and about 40 percent of the total ingot capacity for the production of all forms of rolled steel products. They own and operate about 125 works, inclusive of a much larger number of furnaces for producing pig iron and mills or plants for turning out particular forms of rolled steel products.

Respondent Bethlehem Steel Corporation is a Delaware corporation with its office and principal place of business at 25 Broadway, New York, N. Y., and is engaged in the production and sale of pig iron and various forms of rolled steel, both directly and through subsidiary corporations. They own and operate plants in Pennsylvania, New York, Delaware, Maryland, California, and Washington, and have fabricating works in Pennsylvania, New York, New Jersey, Illinois and California. Said respondent and its subsidiaries control about 14 percent of the total steel ingot capacity. Among the subsidiaries respondent Bethlehem controls are Bethlehem Pacific Coast Steel Corp., 20th and Illinois Sts., San Francisco, Calif., Bethlehem Steel Co. of Pennsylvania, Bethlehem, Pa., and Bethlehem Steel Co. of Delaware, each of which has acted for and on behalf of and under the control of respondent Bethlehem in committing the acts and performing the things as hereinafter alleged and set forth in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

Respondent Republic Steel Corporation is a New Jersey corporation with its office and principal place of business located in the Republic Building, Cleveland, Ohio, and is engaged in the production and sale of pig iron and various forms of rolled steel products, both directly and through subsidiary corporations. They own and operate plants and fabricating works in Ohio, Indiana, Illinois, Pennsylvania, New York, Michigan, Connecticut and Alabama. Said respondent and its subsidiaries control about 8 percent of the total steel ingot capacity. Among the subsidiary corporations controlled by respondent Republic are Truscon Steel Co., Republic Bldg., Cleveland, Ohio, and Fretz-Moon Tube Co., Inc., Butler, Pa., each of which has acted for and on behalf of and under the control of respondent Republic in committing the acts and performing the things as hereinafter alleged and set forth in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

Respondent Jones & Laughlin Steel Corporation is a Pennsylvania corporation with its office and principal place of business located in the Jones & Laughlin Building, Pittsburgh, Pa., engaged in the production and sale of pig iron and various forms of rolled steel products, both directly and through subsidiary corporations. They own and operate a number of plants and fabricating works in Pennsylvania, New York, Louisiana, and Texas. Said respondent and its subsidiaries control about 7 percent of the total steel ingot capacity.

Respondent Youngstown Sheet & Tube Co. is an Ohio corporation with its office and principal place of business located in the Stambaugh Building, Youngstown, Ohio, and is engaged in the production and sale of pig iron and various forms of rolled steel products, both directly and through subsidiary corporations. They own and operate plants and fabricating works in Ohio and Indiana. Said respondent and its subsidiaries control about 5 percent of the total steel ingot capacity. One of respondent Youngstown's subsidiaries is the Youngstown Metal Products, West Federal St., Youngstown, Ohio, which has acted for and on behalf of and under the control of respondent Youngstown Sheet and Tube in committing the acts and performing the things as hereinafter alleged and set forth in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

Respondent American Rolling Mill Co. is an Ohio corporation with its office and principal place of business located at 703 Curtis Street, Middleton, Ohio, and is engaged in the production and sale of pig iron and various forms of rolled steel products, both directly and through subsidiary corporations. They own and operate plants in Ohio, Kentucky, Pennsylvania, and Missouri, and fabricating works in various western and southern States.

Respondent National Steel Corporation is a Delaware corporation with its office and principal place of business in the Grant Bldg., Pittsburgh, Pa., and is engaged in the production and sale of pig iron and various forms of rolled steel products, both directly and through subsidiary corporations. They own and operate plants in West Virginia, Ohio, Michigan, and New York. Among the subsidiary corporations respondent National controls are Weirton Steel Co., 1935 Stillwell St., Weirton, W. Va., and Great Lakes Steel Corp., Tecumseh Road, Ecorse, Detroit, Mich., each of which has acted for and on behalf of and under the control of respondent National in committing the acts and performing the things as hereinafter alleged and set forthe in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

Respondent Inland Steel Company is a Delaware corporation with its office and principal place of business located at 38 South Dearborn Street, Chicago, Illinois, and is engaged in the production and sale of pig iron and various forms of rolled steel products and fabricated articles, both directly and through subsidiary corporations. They own and operate plants and fabricating works in Indiana, Illinois, Wisconsin, Missouri, Michigan, Ohio, New York, Pennsylvania, and New Jersey. One of respondent Inland's subsidiaries is Milcor Steel Co., 36th and Burnham Sts., Milwaukee, Wis., which has acted for and on behalf of and under the control of respondent Inland in committing the acts and performing the things as hereinafter alleged and set forth in PARAGRAPHS FOUR to FOURTEEN, inclusive, hereof and is therefore hereby made a respondent herein.

Respondent Wheeling Steel Corporation is a Delaware corporation with its office and principal place of business in Wheeling, W. Va., and is engaged in the production and sale of pig iron and various forms of rolled steel products and fabricated articles, both directly and through subsidiary corporations. They own and operate plants and fabricating works in West Virginia and Ohio.

The foregoing producer-respondents and their subsidiary corporations represent approximately 80 percent of the total steel ingot producing capacity in the United States.

DESCRIPTION OF THE INDUSTRY AND ITS INTERSTATE CHARACTER

PARAGRAPH THREE. The iron and steel industry is the basic industry of the nation. Iron and steel products are sold directly by producer-respondents as raw materials to producers in a multitude of other important industries such as automobiles, agricultural implements, structural steel, railroad equipment, tools and machinery, hardware, plumbing supplies, and metal cans and containers. Producers of iron and steel also sell a large part of their product direct to large ultimate consumers, including the Federal, State, and municipal governments, and private contractors on various projects. The larger producers, including producer-respondents named specifically herein, are engaged in producing, from their own reserves and for their own use, pig iron and other raw materials used in making steel products. Some of said producer-respondents have expanded their operations to include the sale of pig iron to competitors; also the sale to competitors of ingots and certain semifinished products, including billets, blooms, skelp, sheets, bars, and wire rods, and the fabrication and sale of certain finished steel products, among which are structural steel, plates, bars, sheets, wire and wire products, in competition with concerns which are dependent upon said producer-respondents for the raw materials and semifinished materials out of which such finished products are made. Some of producer-respondents compete with fabricators in the erection of structures in place. Producer-respondents also sell certain of their finished products to jobbers who resell to retailers and to other purchasers. Producer-respondents at times quote and sell direct to certain purchasers in competition with their jobber customers. But for the activities hereinafter alleged producer-respondents would be in active and actual competition with each other as to price and as to matters directly and substantially affecting prices.

Producer-respondents have control of an extensive, continuous, and highly valuable trade and commerce in iron and steel products among the several States. In the regular course thereof they severally produce or purchase, transport, and deliver across State boundary lines to their respective plants located in various

States, large quantities of raw material and supplies, and sell, transport, and deliver, or cause to be delivered, across State lines and to foreign countries large quantities of finished products from their respective places of production. To the extent that producer-respondents act collectively and collusively in the production and pricing of their goods they are in a position to frustrate and destroy price competition among themselves and thereby to dominate and manipulate the markets in which their unorganized customers must buy such goods.

The producer-respondents have exercised that domination and power to control and manipulate the market collectively through the offices of the American Iron and Steel Institute. That fact is evidenced by action taken in connection with the increase in steel prices which was announced during July 1947. Producer-respondents collectively supported that increase through the offices of the Institute. Representatives of producer-respondents have announced that the increase aggregated hundreds of millions of dollars.

OFFENSES CHARGED

General Nature of the Combination and Conspiracy

PARAGRAPH FOUR. Respondent Institute, its officers, board of directors, and members have been for many years and now are engaged in a wrongful and unlawful combination, conspiracy, and agreement in an affecting trade and commerce in iron and steel products throughout the United States for the purpose and with the effect of unduly and unreasonably restraining, suppressing, and destroying competition in the sale of such products. To that end, and particularly to the end of frustrating competition in price among the various producer-respondents, the respondents by concerted action and agreement among themselves have adopted and systematically put into effect a common method and policy with regard to competition in price and other kinds of competition directly and substantially affecting prices. As hereinafter alleged in more detail, producer-respondents in the course of such activities have entered into agreements and understandings that they would quote and offer for sale their respective products on a basis of price quotations cooperatively and collectively provided for and under a system of common basing points, common terms, and sales conditions determined by the joint or cooperative action of the members of the respective groups and as hereinafter set forth, and designed to result in matched or identical delivered price quotations. Such activities, agreements, and understanding have been supplemented by the activities of respondent Institute, its officers, board of directors, and committees as hereinafter more specifically alleged.

Description of Certain of the Overt Acts, Methods and Practices Respondents are Alleged to have Used in Furtherance of the Offenses Charged

PARAGRAPH FIVE. For several years last past respondents have done and performed, and are now doing and performing, acts, methods and practices cooperatively and collectively in establishing, adopting, maintaining and continuing a common course of action and agreement furthering the purposes and objectives of the wrongful and unlawful combination alleged in PARAGRAPH FOUR hereof, resulting in substantial hindrance, frustration, restraint, suppression and prevention of competition, in the sale of iron and steel products in commerce, as "commerce" is defined in the Federal Trade Commission Act. Pursuant to, in furtherance of, and in order to effectuate the purposes, objectives and results of the aforesaid cooperation and common course of action and as a part thereof, respondents have formulated, adopted, performed and put into effect, among others, the overt acts and used the methods, practices, systems and policies described and set forth in the immediately succeeding subparagraphs (a) to (k), inclusive, of this PARAGRAPH FIVE.

(a) They have collectively composed, published and announced prices;

(b) They have used and do now use, a common basing point system involving the use of a formula through which identical or matched delivered price quotations at any given destination may be automatically arrived at with mathematical precision;

(c) They have quoted and sold their products according to a system of delivered price quotations and have refused to make a price quotation except on a basis f. o. b. destination at purchasers' location;

(d) They have refused to assess their charges for delivery according to the actual cost, and in lieu thereof have calculated their delivered charges on the fiction that each shipment is made from one of a limited number of

common basing points cooperatively used and recognized among producer-respondents;

(e) They have calculated and assessed their charges for delivery on the fiction that shipment was to be made by all-rail freight from the applicable basing point to destination whereas the method of delivery actually employed was frequently by truck or water carrier at lower rates;

(f) They have charged for delivery according to compilations or schedules of factors purporting to be all-rail freight rates and of rail-ocean freight rates compiled under the direction and control of respondent Institute and which schedules frequently contained departures from the actual all-rail freight and sometimes contained ocean freight rates higher than other ocean rates that were available;

(g) They have added to prices made on sales for delivery at basing points, switching charges according to a schedule compiled under the direction and control of respondent Institute and which schedule included arbitrary amounts to be added as switching charges in lieu of the actual charges imposed by the railroads which do such switching;

(h) They have calculated and assessed delivery charges on certain unfabricated structural steel products, not from the applicable basing point to destination where such products were delivered to the fabricator-purchaser but to the place where the fabricated structure was to be erected;

(i) They have made only such allowances or deductions from the identical or matched delivered price quotations resulting from use of the common basing point system or formula described herein, as were permitted and authorized by the board of directors of respondent Institute;

(j) They have supported and ratified the activities of a committee on traffic and of other committees that devised ways and means and formulated rules for preventing any of producer-respondents from evading or deviating from the program and policy of having delivery charges made identical for all producer-respondents, thereby removing geographical advantages and disadvantages among sellers and buyers respectively as a factor in price competition;

(k) They have collectively supported the respondent Institute and it has, in turn, as recently as July 1947, utilized the support it received collectively from producer-respondents to support an increase in the price of steel which the producer-respondents had announced. The increase in steel prices thus announced and collectively supported involved delivered price quotations made in accordance with the aforesaid common basing point system of producer respondents.

PARAGRAPH SIX. For many years prior to 1933 the independent producers of pig iron, comprising those who sold that product without using it as raw material for the production of their own steel, whether semifinished or finished, were accustomed to sell pig iron at f. o. b. furnace prices and to permit the purchaser to take delivery without any charge therefor other than the actual cost of such delivery by whatever method of transportation the purchaser elected to use. In connection with their adoption of and adherence to the Steel Code in that year, the independent producers of pig iron, under the leadership of such producers as are named herein and of producer-respondents primarily engaged in producing pig iron for their own use as raw material, extended the common basing point system to include the pricing and sale of pig iron. Thereafter and to the present time respondents have priced and sold pig iron according to the formula of making delivered price quotations described in PARAGRAPH FIVE herein and have used cooperative methods relating to price factors other than delivery charges similar to those hereinafter alleged in PARAGRAPH THIRTEEN.

Respondent pig iron producers have at times concertedly departed from the delivery charges called for by the usual formula, under permission granted by the board of directors of respondent Institute, while otherwise adhering to said formula. As an example and instance, producer-respondents have concertedly refused to make delivered prices on pig iron from the Birmingham district in the usual way by adding to the Birmingham base price factor the freight charges from Birmingham into territory north of the Ohio River, although adding such freight according to the usual formula would have made the lowest delivered price. Producer-respondents thereby arbitrarily withheld from purchasers north of the Ohio River the benefits of their usual formula as to pig iron from the Birmingham district and concertedly required such pig iron to be sold north of the Ohio River at delivered prices governed by the higher delivered prices of northern pig iron producers, based upon northern basing points.

PARAGRAPH SEVEN. To the extent that the formula embodied in and provided for by a common basing point system and its fiction of a common shipping point and a common cost of transportation have been adhered to, competition in price has not existed and cannot exist except through variation in basing point price figures of different producers (at which figures they refuse to sell). Said formula contemplates that there will be no variation in the governing basing point price figures and would be futile in accomplishing respondents' purpose of establishing identical delivered prices if there were any such variation. Such variation in basing point price figures has been forestalled by respondents through conference, interchange of information, and through agreements and understandings.

Respondents have accordingly supplemented, fortified, and made effective their collective and cooperative plans for restraining price competition including their agreements to use their common basing point system and their formula for identical delivered prices by agreeing to do and doing the following acts and things:

(a) They have collaborated in the promotion, establishment, and conduct within the membership of said Institute of a number of separate groups each composed of members who produce and sell similar and competing kinds of iron and steel products. Most of the respondent members are producers of more than one kind of iron and steel products and accordingly affiliate themselves with more than one of the separate groups referred to. Among such groups are those composed of the respective producers of pig iron and of rolled steel products, including rails, structural shapes, plates, bars, sheets, strips, tubular goods, and wire and wire products.

(b) They have promoted and held frequent meetings and conferences among the members and commitees of the Institute and of the various groups referred to in the preceding subparagraph, and have systematically exchanged and interchanged information among themselves calculated to enable them to formulate and carry out a common noncompetitive price policy.

(c) They have informed each other in advance of their proposed base price figures (through refusing to sell except at delivered prices) and have adhered to such announced basing point price figures as the primary factor to which the various delivery charges described in PARAGRAPH FIVE shall be added in order to arrive at the correct delivered price.

(d) They have added such "extras" to the f. o. b. basing point price factor as the board of directors of respondent Institute has approved in order to cover variations as to quantity, quality, chemical content, strength, hardness, size, shape, finish, and similar matters. From time to time through agreement among themselves, respondents have increased the price of extras by substantial amounts aggregating a high percentage of the base price factor and without relation to the extra cost involved. The "extras" on a multitude of alloy steel products have been increased to a point where they are several hundred percent of the base price.

(e) They have made from their basing point price factor used in calculating their delivered prices, only such deductions as are permitted and authorized by the board of directors of respondent Institute. As an example of such permission to depart from the basing point price factor generally applicable, producer-respondents have been making substantial deductions from such factor on various products, when delivered in certain specified territory within the State of Michigan and ending arbitrarily at Michigan's southern boundary line. These deductions have been concertedly made pursuant to authorization from respondent Institute's board of directors and have been concertedly withheld from competing purchasers in other territory.

(f) They have resorted to resale price maintenance in that they have required their jobbers to resell various iron and steel products at delivered prices adopted by the respective producers and identical with those made according to the basing point formula by the respective producers on sales in direct competition with the said jobbers.

(g) They have recognized and sold at jobbers' prices and terms only to those concerns white listed for such recognition by the joint and cooperative action of the various groups described in subparagraph (a) hereof and with which respondent members are respectively affiliated.

(h) They have adhered to uniform terms and conditions of sale, including free credit periods and maximum cash discounts for prompt payment.

Although the aforesaid pricing formula and basing point system has not been used in all instances wherever and to the extent that it has been used here, it has involved the fiction that all shipments were to be made from common shipping points.

PARAGRAPH EIGHT. The present multiple basing point system contemplates that there shall be some governing basing point, the base price figures of which are to be applied to each transaction involving a quotation, sale or delivery. If the governing base price figures are higher than those in use in other basing point areas, producers in those other areas are expected to adopt the base prices of such governing basing point when selling in its territory. The selling territory thus governed by a single basing point frequently includes large sections of the country, comprising many States and parts of States, within which area the basing point price figure of Pittsburgh or of some other single basing point recognized as applicable is to be applied and from which point delivery charges are to be calculated. It is thereby insured that the same identity of delivered prices will result as though the industry were operating under a single basing point system as though all mills were actually located at and were shipping from the governing basing point, and as though all mills were under one ownership and control.

Referring to the Pittsburgh Plus or single basing point system, Judge Elbert H. Gary, long chairman of the board of respondent United States Steel Corporation and of respondent American Iron and Steel Institute, stated that "it was deemed necessary for the orderly conduct of the business to have one basing price * * * so that every user of steel all over the country bought and used his steel on a certain basis, knowing in advance that every one else who bought steel had to pay exactly as he did, with the addition of the increased freight depending upon where he wanted to use the steel." Referring to the multiple basing point system used under the Steel Code and subsequently, the executive secretary of respondent Institute has stated that the present system has the effect of placing the product of every steel producer, wherever located, at the disposal of every buyer at a given destination "at the same price." Respondent Institute declared in March 1935 that the basing point method of quoting prices then in use under the Code was "in principle the same method under which the modern steel industry has operated for more than forty years."

PARAGRAPH NINE. The methods alleged in PARAGRAPH EIGHT have been used by respondents over a period of many years, as follows:

(a) Prior to 1907 such respondents as were then in business participated in pools, zoning arrangements, and other devices for eliminating price competition.

(b) Between 1907 and 1911 such respondents as were then in business participated in the so-called Gary dinners at which agreements were reached as to the base price factor to be used on various products.

The allegations in the two foregoing subparagraphs are based on and drawn from the opinions of the trial court in the Federal suit to dissolve the respondent United States Steel Corporation.

(c) During the periods covered by (a) and (b) of this paragraph, the base price figures agreed upon by producer-respondents were added to the freight from Pittsburgh under the single basing point system in order to obtain and maintain uniform delivered prices.

Between 1920 and 1924 such producer-respondents as were then in business actively cooperated with each other, particularly under the leadership of respondent United States Steel Corporation and its respondent subsidiaries, in the preparation, circulation, adoption and use of compilations of uniform extras and differentials, freight rates, tolerance, and weights, without uniformity in which their purpose to establish uniform delivered prices could not have been accomplished.

The allegations in this subparagraph contained are based on and drawn from the findings of fact made by the Federal Trade Commission after a trial of the issues involved in its complaint against the United States Steel Corporation and its principal producing subsidiaries, Docket No. 760.

PARAGRAPH TEN. For some several years last past producer-respondents have been conducting their business and carrying on their activities under an agreement embodied in a formal resolution adopted on June 6, 1935, by producer-members of respondent Institute representing more than 90 percent of the iron and steel producing capacity of the country. Under the terms of said resolution, which ratified a similar resolution adopted by respondent Institute's board of directors on June 3, 1935, each of the producer-respondents declared its intention of maintaining "the standards of fair competition which are described in the Steel Code." Said resolutions were adopted and have continued in effect after the invalidation of the National Industrial Recovery Act by the Supreme Court of the United States. Among other things said Code provided that "each member of the Code by becoming such member agrees with every other mem-

ber thereof that the Code constitutes a valid and binding contract by and among all members of the Code." The board of directors of respondent American Iron and Steel Institute was the Code Authority which was entrusted by respondents with and exercised the functions of enforcing, administering, interpreting, and applying the provisions of the Code regarding "the standards of fair competition" incorporated therein. Said Institute, its board of directors, committees, and members have exercised similar functions since adoption of the aforesaid resolutions and have continued the Code in effect as a voluntary agreement among the members of the Institute.

PARAGRAPH ELEVEN. The iron and steel products of the producer-respondents herein are numerous and varied, to the extent that respondent United States Steel Corporation manufactures and sells more than 50,000 different products. In order to effectuate the combination and conspiracy to fix and maintain identical delivered price quotations, the respondents have cooperated and agreed upon uniform standards and specifications covering every possible variation and classification of product. Respondents have reached a common understanding and agreement as to basic products upon which base prices are quoted, and have agreed upon "extra" charges, or additions to the base prices to cover every characteristic of an iron or steel product differing from those specified in the basic product classification. By this means producing respondents quote identical delivered prices on any iron or steel product, irrespective of differences in specifications, employing identical extra charges for size; thickness; width; length; shape; variations in content of carbon, manganese, silicon, phosphorus, copper; tolerances; flame cutting; straightening; assembling; welding; boring; testing; inspection painting; finishing; crating or any other characteristic of the product which may differ from the basic product. In a similar manner respondents have cooperated and agreed upon a system of uniform extras and deductions applicable to size or quantity of shipment and classification of customers, so that identical quotations may be made, irrespective of the size of the order of the business of the purchaser.

PARAGRAPH TWELVE. The extra charges and deductions described in PARAGRAPH ELEVEN were promulgated, printed, and copyrighted by the respondent Institute, and thereafter distributed to the industry in a book, "Uniform Extras and Deductions for Products of the Iron and Steel Industry Under the Code of Fair Competition," during the period of the N. R. A. Code. During the period of the Code, the system of extras and deductions was employed by the producing respondents under penalty of fine for departure therefrom. From and after the expiration of the Code of Fair Competition for the Iron and Steel Industry, the system has been employed by the producing respondents by cooperation and agreement and for the purpose and with the effect of quoting identical and matched delivered prices.

PARAGRAPH THIRTEEN. As a part of their common purpose and plan to lessen price competition through their matching of delivered price quotations, the respondents have agreed upon a common list of charges to be added to base prices in lieu of switching, shipping and freight charges. Such charges have been compiled and published by the respondent Institute, ostensibly for the purpose of determining shipping charges, and are employed by the producing respondents in the calculation of delivered price quotations. Each of the producing respondents maintains a traffic department for determining actual shipping charges, including rates and routes. Such calculations are difficult and technical and traffic experts frequently differ as to the proper rate or route involved in a particular shipment. Such calculations often differ through charges in rates or routes which may not become known to different shippers at the same time. To avoid differences in delivered price quotations through employment of different rates, routes or switching charges by different producers, the respondents have cooperated and agreed to employ only the rates which have been published and promulgated by the respondent Institute in the calculation of delivered price quotations.

PARAGRAPH FOURTEEN. Each of the producer-respondent members has contributed to the accomplishment and effectiveness of the acts, things and results alleged in the immediately preceding PARAGRAPHS FOUR and FIVE hereof through its—

(1) use of a basing point method of computing, formulating and using delivered price quotations when other respondent members simultaneously do likewise and by which it is enabled to, and does, match its quotations on a delivered basis with the quotations of other respondent members; and

(2) discrimination between and among its customers through its demanding, charging, accepting and receiving higher net prices from its customers

located near its plant than from its customers more distantly located for goods of like grade, quality and quantity, and thereby is enabled to and does match its quotations on a delivered basis with the quotations of other respondent members.

EFFECTS AND RESULTS OF RESPONDENTS' ACTS AND PRACTICES

PARAGRAPH FIFTEEN. The inherent effects of the adoption and maintenance by the respondent members of the methods and practices described and alleged in PARAGRAPHS FOUR through FOURTEEN herein include all and singularly the following, to-wit:

(1) Substantial lessening of competition among respondent members; and

(2) Unfair and oppressive discrimination against portions of the purchasing public in large areas by depriving such purchasers of the advantage which would otherwise accrue to them as a result of their proximity to the factories of respondent members, and by requiring such purchasers to pay increases over what the net prices to such purchasers would have been if such net prices had been fixed by competition among respondents.

CONCLUSION

PARAGRAPH SIXTEEN. The combination, agreements and understandings of the respondents and the acts, practices, pricing methods, systems, devices and policies as hereinbefore alleged, all and singularly, are unfair and to the prejudice of the public; deprive the public of the benefit of competition; promote discrimination against some buyers and users of respondents' products; have a dangerous tendency and capacity to restrain unreasonably competition in the sale of such products in commerce; have actually hindered, frustrated, restrained, suppressed and prevented competition in such products in commerce; and constitute unfair methods of competition and unfair and deceptive acts and practices in commerce, within the meaning of section 5 of the Federal Trade Commission Act, as amended.

NOTICE

Notice is hereby given you, American Iron and Steel Institute, an incorporated trade association, its officers, directors and members, and United States Steel Corporation and its producing subsidiaries, American Steel and Wire Co., American Bridge Co., Carnegie-Illinois Steel Corp., Columbia Steel Co., National Tube Co., and Tennessee Coal, Iron & Railroad Co., American Sheet and Tin Plate Co., subsidiary of Carnegie-Illinois Steel Corp., and Virginia Bridge Co., subsidiary of Tennessee Coal, Iron & Railroad Co.; Bethlehem Steel Corporation and its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Co. of Pennsylvania and Bethlehem Steel Company of Delaware; Republic Steel Corporation and its subsidiaries, Truscon Steel Co. and Fretz-Moon Tube Co., Inc.; Jones & Laughlin Steel Corporation; Youngstown Sheet & Tube Company and its subsidiary, Youngstown Metal Products Co.; American Rolling Mill Co.; National Steel Corporation and its subsidiaries, Weirton Steel Co. and Great Lakes Steel Corp.; Inland Steel Co., and its subsidiary, Milcor Steel Co.; and Wheeling Steel Corporation, respondents herein, that the 19th day of September, A. D., 1947, at 2 o'clock in the afternoon, is hereby fixed as the time and the offices of the Federal Trade Commission in the city of Washington, D. C., as the place, when and where a hearing will be had on the charges set forth in this complaint, at which time and place you will have the right, under said Act, to appear and show cause why an order should not be entered by said Commission requiring you to cease and desist from the violations of the law charged in the complaint.

You are notified and required, on or before the twentieth day after service upon you of this complaint to file with the Commission an answer to the complaint. If answer is filed and if your appearance at the place and on the date above stated be not required, due notice to that effect will be given you. The rules of practice adopted by the Commission with respect to answers or failure to appear or answer (Rule VIII) provide as follows:

> In case of desire to contest the proceeding the respondent shall, within twenty (20) days from the service of the complaint, file with the Commission an answer to the complaint. Such answer shall contain a concise statement of the facts which constitute the ground of defense. Respondent shall specifically admit or deny or explain each of the facts alleged in the

complaint, unless respondent is without knowledge, in which case respondent shall so state.

* * * * * * *

Failure of the respondent to file answer within the time above provided and failure to appear at the time and place fixed for hearing shall be deemed to authorize the Commission, without further notice to respondent, to proceed in regular course on the charges set forth in the complaint.

If respondent desires to waive hearing on the allegations of fact set forth in the complaint and not to contest the facts, the answer may consist of a statement that respondent admits all the material allegations of fact charged in the complaint to be true. Respondent by such answer shall be deemed to have waived a hearing on the allegations of fact set forth in said complaint and to have authorized the Commission, without further evidence, or other intervening procedure, to find such facts to be true.

Contemporaneously with the filing of such answer the respondent may give notice in writing that he desires to be heard on the question as to whether the admitted facts constitute the violation of law charged in the complaint. Pursuant to such notice, the respondent may file a brief, directed solely to that question, in accordance with Rule XXIV.

Upon request made within fifteen (15) days after service of the complaint, any party shall be afforded opportunity for the submission of facts, arguments, offers of settlement or proposals of adjustment where time, the nature of the proceeding and the public interest permit, and due consideration shall be given to the same. Such submission shall be in writing. The filing of such request shall not operate to delay the filing of the answer.

IN WITNESS WHEREOF, the Federal Trade Commission has caused this, its complaint, to be signed by the Secretary and its official seal to be hereto affixed, at Washington, D. C., this 14th day of August A. D., 1947.

By the Commission.

[SEAL]

OTIS B. JOHNSON, *Secretary.*

UNITED STATES OF AMERICA

BEFORE FEDERAL TRADE COMMISSION

Docket No. 5508

In the Matter of American Iron & Steel Institute, an incorporated trade association, its directors and officers; and United Steel Corporation, and the following of its subsidiaries, American Bridge Company, the American Steel & Wire Co. of New Jersey, Carnegie-Illinois Steel Corporation, Columbia Steel Company, Geneva Steel Company, National Tube Company, Tennessee Coal, Iron & Railroad Company, and Virginia Bridge Company; Bethlehem Steel Corporation, and the following of its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Company; Republic Steel Corporation, and its controlled company, Truscon Steel Company; the American Rolling Mill Company, and its subsidiary, Sheffield Steel Corporation of Ohio; National Steel Corporation, and the following of its subsidiaries, Wierton Steel Company, and Great Lakes Steel Company; Inland Steel Company, and its subsidiary, Milcor Steel Company; the Youngstown Sheet & Tube Company; Jones & Laughlin Steel Corporation; Wheeling Steel Corporation; Colorado Fuel and Iron Corporation; Crucible Steel Company of America; Pittsburgh Steel Company; Sharon Steel Corporation; Alan Wood Steel Company; Acme Steel Co.; Agaloy Tubing Co.; Allegheny Ludlum Steel Corp.; American Chain & Cable Co., Inc.; Atlantic Steel Co.; the Atalntic Wire Co.; the Babcock & Wilcox Tube Co.; Bliss & Laughlin, Inc.; Continental-United Industries Company, Inc.; Buffalo Bolt Co.; Bundy Tubing Co.; A. M. Byers Co.; the Carpenter Steel Co.; Central Iron and Steel Co.; Chicago Steel & Wire Co.; Columbia Steel & Shafting Co.; Columbia Tool Steel Co.; Compressed Steel Shafting Co.; Connors Steel Co.; Continental Steel Corp.; Copperweld Steel Co.; the Cuyahoga Steel & Wire Co.; Detroit Steel Corp; Henry Disston & Sons, Inc.; Eastern Stainless Steel Corp.; Edgewater Steel Co.; Empire Steel Corp.; Firth Sterling Steel & Carbide Corp.; Follansbee-Steel Corp.; Fretz-Moon Tube Co.,

Inc.; Granite City Steel Co.; Griffin Manufacturing Co.; Harrisburg Steel Corp.; International Detrola Corp.; Joslyn Manufacturing & Supply Co.; Judson Steel Corp.; Keystone Drawn Steel Co.; Keystone Steel & Wire Co.; Laclede Steel Co.; Latrobe Electric Steel Co.; Lukens Steel Co.; the Mahoning Valley Steel Co.; the Medart Co.; Mercer Tube and Manufacturing Co.; the Midvale Co.; Moltrup Steel Products Co.; National Standard Co.; the National Steel Co.; Northwestern Steel & Wire Co.; Pacific States Steel Corp.; the Phoenix Iron Co.; Pittsburgh Tool Steel Wire Co.; Pittsburgh Tube Co.; the Pollak Steel Co.; Reeves Steel and Mfg. Co.; John A. Roebling's Sons Co.; Rotary Electric Steel Co.; the Standard Tube Co.; Superior Steel Corp.; Sweet's Steel Co.; the Thomas Steel Co.; the Timken Roller Bearing Co.; Universal Cyclops Steel Corp.; Vanadium-Alloys Steel Co., and its subsidiary, Anchor Drawn Steel Co.; Vulcan Crucible Steel Co.; Washington Steel Corp.; Western Automatic Machine Screw Co.; Wheatland Tube Co.; Wisconsin Steel Co.; Worth Steel Co.; and Wyckoff Steel Co.

AMENDED COMPLAINT

Pursuant to the provision of an Act of Congress entitled "An Act to Create a Federal Trade Commission, to define its powers and duties, and for other purposes," approved September 26, 1914, and commonly known as the Federal Trade Commission Act, the Commission having reason to believe that the respondents herein named have violated the said Act of Congress, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, the Commission hereby issues its amended complaint stating its charges in that respect as follows:

ORGANIZATION AND DESCRIPTION OF RESPONDENTS

PARAGRAPH ONE. Each of the parties named below in this paragraph ONE is hereby named as a respondent herein.

Company name	State of incorporation	Principal place of business
American Iron & Steel Institute, its directors and officers.	New York	350 5th Ave., New York, N. Y.
United States Steel Corp. and the following of its subsidiaries:	New Jersey	71 Broadway, New York, N. Y.
American Bridge Co	do	Frick Bldg., Pittsburgh, Pa.
The American Steel & Wire Company of New Jersey.	do	Rockefeller Bldg., Cleveland Ohio.
Carnegie-Illinois Steel Corp	do	Carnegie Bldg., Pittsburgh, Pa.
Columbia Steel Co	Delaware	Russ Bldg., San Francisco, Calif.
Geneva Steel Co	do	Geneva, Utah.
National Tube Co	do	Frick Bldg., Pittsburgh, Pa.
Tennessee Coal, Iron & Railroad Co	Tennessee	Brown-Marx Bldg., Birmingham, Ala.
Virginia Bridge Co	New Jersey	Roanoke, Va.
Bethlehem Steel Corp. and the following of its subsidiaries:	Delaware	25 Broadway, New York, N. Y.
Bethlehem Pacific Coast Steel Corp	do	20th and Illinois Sts., San Francisco, Calif.
Bethlehem Steel Co	Pennsylvania	Bethlehem, Pa.
Republic Steel Corp. and its controlled company:	New Jersey	Republic Bldg., Cleveland, Ohio.
Truscon Steel Co	Michigan	Do.
The Youngstown Sheet & Tube Co	Ohio	Stambaugh Bldg., Youngstown, Ohio.
Jones & Laughlin Steel Corp	Pennsylvania	Jones & Laughlin Bldg., Pittsburgh, Pa.
American Rolling Mill Co., and its subsidiary.	Ohio	703 Curtis St., Middletown, Ohio.
Sheffield Steel Corporation of Ohio	do	Sheffield Station, Kansas City, Mo.
National Steel Corp. and the following of its subsidiaries:	Delaware	Grant Bldg., Pittsburgh, Pa.
Weirton Steel Co	West Virginia	1935 Stillwell St., Weirton, W. Va.
Great Lakes Steel Co	Delaware	Tecumseh Rd., Ecorse, Detroit, Mich.
Inland Steel Co. and its subsidiary	do	38 South Dearborn St., Chicago, Ill.
Milcor Steel Co	do	36th and Burnham Sts., Milwaukee, Wis.
Wheeling Steel Corp	do	Wheeling, W. Va.
Colorado Fuel & Iron Corp	Colorado	Continental Oil Bldg., Denver, Colo.

Company name	State of incorporation	Principal place of business
Crucible Steel Company of America	New Jersey	405 Lexington Ave., New York, N. Y.
Pittsburgh Steel Co	Pennsylvania	Grant Bldg., Pittsburgh, Pa.
Sharon Steel Corp	do	Sharon, Pa.
Alan Wood Steel Co	do	Conshohocken, Pa.
Acme Steel Co	Illinois	2840 Archer Ave., Chicago, Ill.
Agaloy Tubing Co	Place of incorporation unknown.	1027 Newark Ave., Elizabeth, N. J.
Allegheny Ludlum Steel Corp	Pennsylvania	Brackenridge, Pa.
American Chain & Cable Co., Inc	New York	230 Park Ave., New York, N. Y.
Atlantic Steel Co	Delaware	Atlanta, Ga.
The Atlantic Wire Co	Connecticut	1 Church St., Bramford, Conn.
The Babcock & Wilcox Tube Co	Pennsylvania	Beaver Falls, Pa.
Bliss & Laughlin, Inc	Delaware	Harvey, Ill.
Continental-United Industries Co., Inc	do	345 Madison Ave., New York, N. Y.
Buffalo Bolt Co	New York	North Tonawanda, N. Y.
Bundy Tubing Co	Place of incorporation unknown.	Hern at Springfield, Detroit, Mich.
A. M. Byers Co	Pennsylvania	Clark Bldg., Pittsburgh, Pa.
The Carpenter Steel Co	New Jersey	101 West Bern, Reading, Pa.
Central Iron & Steel Co	Pennsylvania	Harrisburg, Pa.
Chicago Steel & Wire Co	Illinois	10257 Torrence Ave., Chicago, Ill.
Columbia Steel & Shafting Co	Pennsylvania	Postoffice Box 1557, Pittsburgh, Pa. (works at Carnegie, Pa).
Columbia Tool Steel Co	Illinois	Lincoln Highway & State St., Chicago Heights, Ill.
Compressed Steel Shafting Co	Massachusetts	1587 Hyde Park Ave., Readville, Mass.
Connors Steel Co	Delaware	Birmingham, Ala.
Continental Steel Corp	Indiana	Kokomo, Ind.
Copperweld Steel Co	Pennsylvania	Glassport, Pa.
The Cuyahoga Steel & Wire Co	Ohio	Longwood Ave., Maple Heights, Cleveland, Ohio.
Detroit Steel Corp	Michigan	1025 South Oakwood Ave., Detroit, Mich.
Henry Disston & Sons, Inc	Pennsylvania	Tacony, Philadelphia, Pa.
Eastern Stainless Steel Corp	Maryland	Box 1975, Baltimore, Md.
Edgewater Steel Co	Pennsylvania	Post Office Box 478, Pittsburgh, Pa. (works at Oakmont, Pa.).
Empire Steel Corp	Ohio	Mansfield, Ohio.
Firth Sterling Steel & Carbide Corp.	Pennsylvania	McKeesport, Pa.
Follansbee Steel Corp	Delaware	3d and Liberty Ave., Pittsburgh, Pa.
Fretz-Moon Tube Co., Inc	Pennsylvania	Butler, Pa.
Granite City Steel Co	Delaware	20th and Madison Ave., Granite City, Ill.
Griffin Manufacturing Co	Pennsylvania	Cherry and Huron Sts., Erie, Pa.
Harrisburg Steel Corp	do	Harrisburg, Pa.
International Detrola Corp	Indiana	Beard Ave. at Chatfield, Detroit, Mich.
Joslyn Manufacturing & Supply Co	Illinois	20 North Wacker Dr., Chicago, Ill.
Judson Steel Corp	California	4200 Eastshore Highway, Emeryville, Calif.
Keystone Drawn Steel Co	Pennsylvania	Spring City, Pa.
Keystone Steel & Wire Co	Illinois	Peoria, Ill.
Laclede Steel Co	Missouri	Arcade Bldg., St. Louis, Mo.
Latrobe Electric Steel Co	Pennsylvania	Latrobe, Pa.
Lukens Steel Co	do	Coatesville, Pa.
The Mahoning Valley Steel Co	Ohio	McKees Lane, Niles, Ohio.
The Medart Co	Missouri	100 Potomac St., St. Louis, Mo.
Mercer Tube & Manufacturing Co	Delaware	200 Clark St., Sharon, Pa.
The Midvale Co	do	4320 Wissahickon Ave., Nicetown, Philadelphia, Pa.
Moltrup Steel Products Co	Pennsylvania	Beaver Falls, Pa.
National Standard Co	Michigan	Niles, Mich.
The National Supply Co	Pennsylvania	330 Grant St., Pittsburgh, Pa.
Northwestern Steel & Wire Co	Illinois	Sterling, Ill.
Pacific States Steel Corp	California	Niles, Calif.
The Phoenix Iron Co	Pennsylvania	121 Bridge St., Phoenixville, Pa.
Pittsburgh Tool Steel Wire Co	do	Monaca, Pa.
Pittsburgh Tube Co	Delaware	323 4th Ave., Pittsburgh, Pa.
The Pollak Steel Co	Ohio	820 Temple Bar Bldg., Cincinnati, Ohio.
Reeves Steel & Manufacturing Co	do	Dover, Ohio.
John A. Roebling's Sons Co	New Jersey	640 South Broad St., Trenton, N. J.
Rotary Electric Steel Co	Delaware	21400 Mound Rd., Warren Township, Mich.
The Standard Tube Co	Michigan	14600 Woodward Ave., Highland Park, Mich.

Company name	State of incorporation	Principal place of business
Superior Steel Corp	Virginia	Grant Bldg., Pittsburgh, Pa.
Sweets Steel Co	Pennsylvania	Williamsport, Pa.
The Thomas Steel Co	Ohio	Delaware Ave., Warren, Ohio.
The Timken Roller Bearing Co	do	1935 Deuber Ave. SW., Canton, Ohio.
Universal-Cyclops Steel Corp	Pennsylvania	Bridgeville, Pa.
Vanadium-Alloy Steel Co. and its subsidiary:	do	Latrobe, Pa.
Anchor Drawn Steel Co	Place of incorporation unknown.	Do.
Vulcan Crucible Steel Co	New Jersey	West Aliquippa, Pa.
Washington Steel	Place of incorporation unknown.	Washington, Pa.
Western Automatic Machine Screw Co	do	117 Main St., Flemington, N. J.
Wheatland Tube Co	Pennsylvania	Real Estate Trust Bldg., Philadelphia Pa.
Wisonsin Steel Co	Place of incorporation unknown.	180 North Michigan Ave., Chicago, Ill.
Worth Steel Co	Delaware	Claymont, Del.
Wyckoff Steel Co	Pennsylvania	First National Bank Bldg., Pittsburgh, Pa.

Sometimes hereinafter the aforesaid American Iron & Steel Institute will be referred to as Respondent Institute. Its officers and directors sometimes will be referred to as officers and directors of Respondent Institute. Each of the other parties named above in this PARAGRAPH ONE sometimes will be referred to as a Producer Respondent and, sometimes collectively, they will be referred to as Producer Respondents.

The following Producer Respondents are members of Respondent Institute, and they are sometimes hereinafter referred to as Members: Acme Steel Co.; Agaloy Tubing Co.; Alan Wood Steel Co.; Allegheny Ludlum Steel Corp.; The American Rolling Mill Co.; Anchor Drawn Steel Co.; Atlantic Steel Co.; The Atlantic Wire Co.; The Babcock & Wilcox Tube Co.; Bethlehem Steel Co.; Bliss & Laughlin, Inc.; Buffalo Bolt Co.; Bundy Tubing Co.; A. M. Byers Co.; The Carpenter Steel Co.; Central Iron and Steel Co.; Chicago Steel & Wire Co.; Colorado Fuel & Iron Corp.; Columbia Steel & Shafting Co.; Columbia Tool Steel Co.; Compressed Steel Shafting Co.; Connors Steel Co.; Continental Steel Corp.; Copperweld Steel Co.; Crucible Steel Co. of America; The Cuyahoga Steel & Wire Co.; Detroit Steel Corp.; Henry Disston & Sons, Inc.; Eastern Stainless Steel Corp.; Edgewater Steel Co.; Empire Steel Corp.; Firth Sterling Steel & Carbide Corp.; Follansbee Steel Corp.; Fretz-Moon Tube Co., Inc.; Granite City Steel Co.; Griffin Manufacturing Co.; Harrisburg Steel Corp.; Inland Steel Co.; Jones & Laughlin Steel Corp.; Joslyn Manufacturing & Supply Co.; Judson Steel Corp.; Keystone Drawn Steel Co.; Keystone Steel & Wire Co.; Laclede Steel Co.; Latrobe Electric Steel Co.; Lukens Steel Co.; The Mahoning Valley Steel Co.; The Medart Co.; Mercer Tube and Manufacturing Co.; The Midvale Co.; Moltrup Steel Products Co.; National Standard Co.; National Steel Corp; Northwestern Steel & Wire Co.; Pacific States Steel Corp.; The Phoenix Iron Co.; Pittsburgh Steel Co.; Pittsburgh Tool Steel Wire Co.; Pittsburgh Tube Co.; The Pollak Steel Co.; Reeves Steel and Mfg. Co.; Republic Steel Corp.; John A. Roebling's Sons Co.; Rotary Electric Steel Co.; Sharon Steel Corp.; The Standard Tube Co.; Superior Steel Corp.; Sweet's Steel Co.; The Thomas Steel Co.; United States Steel Corp.; Universal Cyclops Steel Corp.; Vanadium-Alloys Steel Co.; Vulcan Crucible Steel Co.; Washington Steel Corp.; Western Automatic Machine Screw Co.; Wheatland Tube Co.; Wheeling Steel Corp.; Wisconsin Steel Co.; Worth Steel Co.; Wyckoff Steel Co.; The Youngstown Sheet & Tube Co.

DESCRIPTION OF THE INDUSTRY AND THE INTERSTATE CHARACTER OF RESPONDENTS' BUSINESS

PARAGRAPH TWO. The steel industry is one of the basic industries of the Nation. Respondent Producers produce and sell substantially all of the steel that is produced and sold in the country. According to reports of Respondent Institute, its members produce more than 96 percent of the country's total output of steel. The total dollar volume of their sales of the products involved herein in 1946 was approximately $5,000,000,000. The steel products which they produce and sell are regularly used in the production of automobiles, agricultural imple-

ments, tools and machinery, hardware, plumbing supplies, metal cans and containers, railroad equipment, homes, buildings, public buildings, bridges, dams, and other products and things and are of great importance to the public generally. The Federal, State, and municipal governments of the Nation purchase large quantities of steel annually.

Producer Respondents, in the regular course of their business, are engaged in interstate commerce, as "commerce" is defined in the Federal Trade Commission Act, and in that connection have used the acts, policies, and methods hereinafter alleged. They sell and deliver across State boundary lines and in the District of Columbia large quantities of their products and supplies, and, in addition, sell and export steel products to purchasers thereof in foreign countries.

Respondents have the power to dominate and manipulate the markets in which their unorganized customers and consumers must buy their products and to frustrate, destroy, suppress, and eliminate competition between themselves. The American Iron and Steel Institute is made use of my Producer Respondents as a vehicle or medium for collective action and it assists the Producer Respondents in dominating and manipulating markets and in the carrying on of the unfair methods of competition hereinafter alleged. Collective action taken by Producer Respondents through respondent Institute in connection with the increase in steel prices which was announced during July 1947 is an instance in point.

OFFENSES CHARGED

PARAGRAPH THREE. For many years last past and continuing to the present time, respondents have combined, conspired and agreed to act collusively and have acted collusively, and are now acting collusively, in restraining, suppressing, frustrating and destroying competition in the sale of steel products, including but not restricted to (1) ingots; (2) semi-finished rolled products (e. g. Blooms, billets, tube rounds, sheet bars, tin-plate bars, and slabs); (3) finished rolled products (e. g. rails and accessory rail supplies, structural shapes, bars, wire rods, skelp, sheet steel piling, sheets, strip steel, and tin mill block plate); and (4) further finished steel products (e. g. cold finished bars, rods, sheets and strips, galvanized sheet and strip; terne plate and other coated sheet and strip tin plate, pipe and tubes, nails, wire and wire products) in commerce, as "commerce" is defined in the Federal Trade Commission Act and in violation of section 5 of the Federal Trade Commission Act (15 U. S. C. A. 45) in the commission of acts and the promulgation and use of policies, methods and practices hereinafter more particularly set forth in subparagraphs 1 to 3, inclusive, of this PARAGRAPH THREE and in each of the succeeding paragraphs, namely, PARAGRAPH FOUR, PARAGRAPH FIVE, PARAGRAPH SIX, AND PARAGRAPH SEVEN.

1. They have collusively composed, established and announced prices—

(a) through the maintenance and use of the basing point practices and methods particularly described, set forth and alleged in PARAGRAPH FOUR;

(b) through the collective compilation of pricing factors more particularly described, set forth and alleged in PARAGRAPH FIVE; and

(c) through collective designation of certain steel products as "base products" for pricing purposes as is more particularly described, set forth and alleged in PARAGRAPH SIX.

2. They have directly and indirectly through the offices and organization of Respondent Institute, and otherwise, collectively furthered their designs and plans to restrain, suppress, frustrate and lessen competition in the sale of steel products—

(a) through agreements and collective action, including those particularized, set forth and alleged in PARAGRAPH SEVEN;

(b) through discussions by representatives of Producer Respondents in group meetings where they have reached a meeting of their minds that it would be to the self-interest of each of the Producer Respondents to so act as to forestall increases in steel production facilities and acting thereafter in accordance with such understandings;

(c) Through agreements, methods, and practices with respect to making quotations to railroads;

(d) through taking collective and collusive action from time-to-time to promote the making of delivered price quotations by Producer Respondents to customers at any given destination and in the promotion of adherence to such quotations;

(e) through collective action with respect to resale price maintenance plans to further frustrate price competition and in so doing requiring jobbers to sell various steel products at the delivered price quotations adopted

and specified by the Producer Respondents which were calculated in accordance with the basing point practices and methods referred to in PARAGRAPH FOUR herein;

(f) through taking collective action for establishment of a classification of customers designated as "jobbers" and the designation of particular persons, firms and individuals to be listed within that classification as provided for in joint action by members of one or more of the various "groups" of Respondents referred to in PARAGRAPH SEVEN herein;

(g) through collective action in establishing and maintaining uniform terms and conditions of sale, including free credit periods and maximum cash discounts for prompt payment.

3. They have collusively acted to prevent deviations from their collusively announced prices—

(a) through the taking of collective action to prevent diversions of shipments in transit;

(b) through the taking of collective action to forestall and prevent reductions in railroad rates;

(c) through the taking of collective action to curtail fabrication in transit;

(d) through the taking of collective action to curtail price quotations on an f. o. b. mail basis when unrelated to or calculated in accordance with the basing point practices particularized in PARAGRAPH FOUR; and

(e) through the taking of collective action to arrive at the establishment of uniform quotations on extras as is more particularly described, set forth and alleged in PARAGRAPH SIX.

PARAGRAPH FOUR. Producer Respondents have followed and do now follow a planned common and cooperative course of action in their employment and use of basing point practices, as hereinafter particularized, set forth and alleged in this PARAGRAPH FOUR. The practices involve the designating of a certain location or a limited number of locations as basing points for pricing purposes. Such locations will hereinafter sometimes be referred to as basing points. For each such basing point a factor "base price" is announced. Such factor will hereinafter sometimes be referred to as "base price" or "basing point price." The factor of "base price" thus used is announced by respondents as f. o. b. Pittsburgh, Pennsylvania, on some products. On other steel products with respect to a given delivered price quotation, the factor "base price," as announced by Producer Respondents, is announced as f. o. b. one or two or more locations (namely, a basing point) plus "freight applicator" therefor to said destination. Regularly, and in many instances, producer Respondent produce steel at and make shipments from locations other than those designated and used as basing points in calculating the applicable delivered price quotations.

In calculating, arriving at and announcing delivered price quotations, Producer Respondents use a formula, including the factor "base Price" and a factor designated by respondents as "freight Rate." The latter factor, when used by Producer Respondents for pricing purposes, is taken from a compilation cooperatively and collectively produced by respondents through Respondent Institute. The factor thus designated by Respondents as "freight rate" is herein sometimes referred to as "freight applicator." Thus, the delivered price quotations of Producer Respondents involve the use of a formula, namely, "base price" plus "freight applicator." The factor "freight applicator" thus utilized purports to represent the applicable freight rate on a given shipment. However, in no instance except by happenstance does it represent the sum of the applicable freight rate on a shipment by a Producer Respondent where the delivered price therefor was based on the basing point price f. o. b. a location other than that from which shipment was made. Furthermore, variance thus arising in many instances on some steel products occur because Producer Respondents making quotations in such instances have utilized the factor "base price" at a basing point plus the factor "freight applicator" supposedly representing freight charges from the basing point thus selected to the destination involved, although shipment is actually made from a production point much nearer freight-wise and at substantially lower actual transportation cost than the sum represented by said "freight applicator" used as a part of the formula for the delivered price. In other instances, Producer Respondents, although making shipments from one of the aforesaid basing points calculates delivered price quotations with respect thereto through the use of the formula of base price plus freight applicator applicable from an entirely different basing point than the point of shipment.

PARAGRAPH FIVE. As a part of their common purpose and plan to lessen price competition, Respondents have agreed upon a common list of charges to be

added to base prices in lieu of switching, shipping and freight charges. Such charges have been compiled and published by the Respondent Institute, ostensibly for the purpose of determining shipping charges, and are employed by the Producer Respondents in the calculation of delivered price quotations. Each Producer Respondent maintains a traffic department for determining actual shipping charges, including rates and routes. Such calculations are difficult and technical and traffic experts frequently differ as to the proper rate or route involved in a particular shipment. Such calculations often differ through charges in rates or routes which may not become known to different shippers at the same time. To avoid differences in delivered price quotations through employment of different rates, routes or switching charges by different Producer Respondents, the Respondents have employed in the calculation of delivered price quotations, only the rates which have been published and promulgated by the Respondent Institute. Thus, Institute freight rate books are in reality price books.

In computing and calculating their delivered price quotations in accordance with the aforesaid compilation or schedule of factors purporting to be all-rail freight rates and rail-ocean freight rates compiled and disseminated collectively through Respondent Institute, Respondents frequently assess and charge amounts for delivery that are higher than those available according to official published tariffs and frequently deny purchasers the benefit of lower rates otherwise available for water or truck haul; likewise, Respondents include in delivered price quotations arbitrary amounts in lieu of actual switching charges made by the railroads for switching cars, which said arbitrary charges Respondents have made available to themselves by collective collusive action through Respondent Institute and otherwise.

PARAGRAPH SIX. Producer Respondents produce and sell thousands of steel products which vary in size, shape, chemical composition, physical treatment and otherwise from one another. Thus, the potentiality for price competition among these Respondents is very great. To prevent this potential competition from finding expression and in furtherance of their general combination, Respondents have adopted common methods of pricing and selling their great variety of products as follows: They have collectively and collusively classified their products, making certain products "base" products for pricing purposes, and variations therefrom "extras" or "deductions." An "extra" or "deduction" is any variation in quality, size, chemical composition, physical treatment or otherwise from the "base" product. They have collectively and concertedly classified "extras" and "deductions" for pricing purposes and have concertedly and collusively established and maintained uniform prices for the aforesaid "extras" and "deductions," usually in terms of monetary amounts per hundred pounds or per pound or in terms of percent of the applicable base price factor. The said monetary amounts or percentum are added to or deducted from the applicable "base price" factor as provided for by the aforesaid collective and collusive action of Respondents. Respondents have also collusively and concertedly established and maintained a system of uniform "extras" and "deductions" applicable to size or quantity of shipment or services rendered.

From time to time through agreement among themselves, Respondents have arbitrarily increased the price of "extras" by substantial amounts aggregating a high percentage of the "base" product price factor and without relation to the cost of the "extra" involved.

PARAGRAPH SEVEN. For several years last past Producer Respondents have been conducting their business and carrying on their activities under an agreement embodied in a formal resolution adopted on June 6, 1935, by Producer Members of Respondent Institute representing more than 90 percent of the steel producing capacity of the country. Under the terms of said resolution, which ratified a similar resolution adopted by respondent Institute's board of directors on June 3, 1935, each of the Producer Respondents declared its intention of maintaining "the standards of fair competition which are described in the Steel Code." Said resolutions were adopted and have continued in effect after the invalidation of the National Industrial Recovery Act by the Supreme Court of the United States. Among other things, said Code provided that "each member of the Code, by becoming such member, agrees with every other member thereof that the Code constitutes a valid and binding contract by and among all members of the Code." The board of directors of respondent American Iron and Steel Institute was the Code Authority which was entrusted by Respondents with and exercised the functions of enforcing, administering, interpreting, and applying the provisions

of the Code regarding "the standards of fair competition" incorporated therein. Said Institute, its board of directors, committees, and members have exercised similar functions since adoption of the aforesaid resolutions and have continued the Code in effect as a voluntary agreement among the members of the Institute.

As recently as July 1947, the Institute was used by Respondents to collusively support an increase in the price of steel which the Producer Respondents had announced. Respondent producers have continuously collaborated in the promotion, establishment and conduct within the membership of Respondent Institute of a number of separate groups each composed of members who produce and sell similar and competing kinds of steel products, and have promoted and held frequent meetings, conferred, and systematically exchanged and interchanged information among and between themselves to carry out a noncompetitive price policy. Many of the Producer Respondents are producers of more than one kind of steel product and accordingly affiliated with more than one of the separate groups referred to. Among such groups are those composed of the respective producers of rolled steel products, rails, structural shapes, plates, bars, sheets, strips, tubular goods and wire products.

PARAGRAPH EIGHT. Each of the Producer Respondents has contributed to the accomplishment of the acts and the effects flowing therefrom, as alleged in this complaint, by—

(1) Use of the basing-point practices as particularized, set forth and alleged in PARAGRAPH FOUR;

(2) The practice of discrimination between and among its customers by demanding, charging, accepting and receiving higher net prices from its customers located near its plant than from its customers more distantly located for goods of like grade, quality and quantity, and whereby it is enabled to and does match its quotations on a delivered basis with the quotations of other respondent members;

(3) Action in quoting prices to customers located in the States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, which are arrived at through the application of basing-point practices as particularized in PARAGRAPH FOUR, and in so doing quotes prices as though shipments were being made from mills east of the Rocky Mountains, although deliveries are actually made from mills west of the Rocky Mountains and in some instances near the location of the customer's business;

(4) Use of the compilations more particularly described, set forth and alleged in PARAGRAPH FIVE;

(5) Use of the designations of "base products" for pricing purposes in the manner more particularly set forth and alleged in PARAGRAPH SIX;

(6) Use of compilations of "extras" or "deductions" more particularly described, set forth and alleged in PARAGRAPH SIX;

(7) Acting in accordance with the understandings, agreements, plans, methods, policies, and practices more particularly described, set forth and alleged in PARAGRAPHS THREE and SEVEN.

PARAGRAPH NINE. The inherent effects of the adoption and maintenance by the respondent members of the practices described and alleged in PARAGRAPH FOUR herein and of the collective action alleged in subparagraph 3 (d) of PARAGRAPH THREE herein include all and singularly the following, to wit:

(1) Substantial lessening of competition among respondent members;

(2) Unfair and oppressive discrimination against portions of the purchasing public in large areas by depriving such purchasers of the advantage which would otherwise accrue to them as a result of their proximity to the factories of respondent members, and by requiring such purchasers to pay increases over what the net prices to such purchasers would have been if such net prices had been fixed by competition among respondents; and

(3) Deprivation of equal opportunities for buyers to secure supplies of steel in times of short supply when respondent producers refuse to quote and sell f. o. b. mill.

PARAGRAPH TEN. The combination, agreements, and understandings of the respondents and the acts, practices, pricing methods, systems, devices, and policies are hereinbefore alleged, all and singularly, are unfair and to the prejudice of the public; deprive the public of the benefit of competition; promote discrimination against some buyers and users of respondents' products; have a dangerous tendency and capacity to restrain unreasonably competition in the sale of such products in commerce; have actually hindered, frustrated, restrained, suppressed, and prevented competition in such products in commerce;

and constitute unfair methods of competition and unfair and deceptive acts and practices in commerce, within the meaning of section 5 of the Federal Trade Commission Act, as amended.

WHEREFORE, the premises considered, the Federal Trade Commission on this 13th day of November A. D. 1947, issues this as its amended complaint against said respondents.

NOTICE

Notice is hereby given you, American Iron and Steel Institute, an incorporated trade association, its officers and directors; United States Steel Corporation and the following of its subsidiaries, American Bridge Company, The American Steel & Wire Company of New Jersey, Carnegie-Illinois Steel Corporation, Columbia Steel Company, Geneva Steel Company, National Tube Company, Tennessee Coal, Iron & Railroad Company, Virginia Bridge Company; Bethlehem Steel Corporation and the following of its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Company, Republic Steel Corporation and its controlled company, Truscon Steel Company; The American Rolling Mill Company and its subsidiary, Sheffield Steel Corporation of Ohio; National Steel Corporation, and the following of its subsidiaries: Weirton Steel Company, Great Lakes Steel Company; Inland Steel Company and its subsidiary, Milcor Steel Company; The Youngstown Sheet & Tube Company; Jones & Laughlin Steel Corporation; Wheeling Steel Corporation; Colorado Fuel and Iron Corporation; Crucible Steel Company of America; Pittsburgh Steel Company; Sharon Steel Corporation; Alan Wood Steel Company; Acme Steel Co.; Agaloy Tubing Co.; Allegheny Ludlum Steel Corp.; American Chain & Cable Co., Inc.; Atlantic Steel Co.; The Atlantic Wire Co.; The Babcock & Wilcox Tube Co.; Bliss & Laughlin, Inc.; Continental-United Industries Company, Inc.; Buffalo Bolt Co.; Bundy Tubing Co.; A. M. Byers Co.; The Carpenter Steel Co.; Central Iron and Steel Co.; Chicago Steel & Wire Co.; Columbia Steel & Shafting Co.; Columbia Tool Steel Co.; Compressed Steel Shafting Co.; Connors Steel Co.; Continental Steel Corp.; Copperweld Steel Co.; The Cuyahoga Steel & Wire Co.; Detroit Steel Corp.; Henry Disston & Sons, Inc.; Eastern Stainless Steel Corp.; Edgewater Steel Co.; Empire Steel Corp.; Firth Sterling Steel & Carbide Corp.; Follansbee Steel Corp.; Fretz-Moon Tube Co., Inc.; Granite City Steel Co.; Griffin Manufacturing Co.; Harrisburg Steel Corp.; International Detrola Corp.; Joslyn Manufacturing & Supply Co.; Judson Steel Corp.; Keystone Drawn Steel Co.; Keystone Steel & Wire Co.; Laclede Steel Co.; Latrobe Electric Steel Co.; Lukens Steel Co.; The Mahoning Valley Steel Co.; The Medart Co.; Mercer Tube and Manufacturing Co.; The Midvale Co.; Moltrup Steel Products Co.; National Standard Co.; The National Supply Co.; Northwestern Steel & Wire Co.; Pacific States Steel Corp.; The Phoenix Iron Co.; Pittsburgh Tool Steel Wire Co.; Pittsburgh Tube Co.; The Pollak Steel Co.; Reeves Steel and Mfg. Co.; John A. Roebling's Sons Co.; Rotary Electric Steel Co.; The Standard Tube Co.; Superior Steel Corp.; Sweet's Steel Co.; The Thomas Steel Co.; The Timken Roller Bearing Co.; Universal Cyclops Steel Corp.; Vanadium-Alloys Steel Co., and its subsidiary, Anchor Drawn Steel Co.; Vulcan Crucible Steel Co.; Washington Steel Corp.; Western Automatic Machine Screw Co.; Wheatland Tube Co.; Wisconsin Steel Co.; Worth Steel Co.; and Wyckoff Steel Co.; Respondents herein, that the 19th day of December A. D. 1947, at 2 o'clock in the afternoon, is hereby fixed as the time and the offices of the Federal Trade Commission in the city of Washington, D. C., as the place, when and where a hearing will be had on the charges set forth in this amended complaint, at which time and place you will have the right, under said Act, to appear and show cause why an order should not be entered by said Commission requiring you to cease and desist from the violations of the law charged in the amended complaint.

You are notified and required, on or before the twentieth day after service upon you of this amended complaint, to file with the Commission an answer to the amended complaint. If answer is filed and if your appearance at the place and on the date above stated be not required, due notice to that effect will be given you. The rules of practice adopted by the Commission with respect to answers or failure to appear or answer (Rule VIII) provide as follows:

> In case of desire to contest the proceeding the respondent shall, within twenty (20) days from the service of the complaint, file with the Commission an answer to the complaint. Such answer shall contain a concise statement of the facts which constitute the ground of defense. Respondent shall specifically admit or deny or explain each of the facts alleged in the

complaint, unless respondent is without knowledge, in which case respondent shall so state.

Failure of the respondent to file answer within the time above provided and failure to appear at the time and place fixed for hearing shall be deemed to authorize the Commission, without further notice to respondent, to proceed in regular course on the charges set forth in the complaint.

If respondent desires to waive hearing on the allegations of fact set forth in the complaint and not to contest the facts, the answer may consist of a statement that respondent admits all the material allegations of fact charged in the complaint to be true. Such answer will constitute a waiver of any hearing as to the facts alleged in the complaint and the Commission may proceed to make its findings as to the facts and conclusions based upon such answer and enter its order disposing of the matter without any intervening procedure. The respondent may, however, reserve in such answer the right to other intervening procedure, including a hearing upon proposed conclusions of fact or law, in which event he may in accordance with Rule XXIV file his brief directed solely to the questions reserved.

Upon request made within fifteen (15) days after service of the complaint, any party shall be afforded opportunity for the submission of facts, arguments, offers of settlement, or proposals of adjustment where time, the nature of the proceeding, and the public interest permit, and due consideration shall be given to the same. Such submission shall be in writing. The filing of such request shall not operate to delay the filing of the answer.

IN WITNESS WHEREOF, the Federal Trade Commission has caused this, its amended complaint, to be signed by the Secretary and its official seal to be hereto affixed, at Washington, D. C., this 13th day of November, A. D., 1947.

By the Commission.

[SEAL] WM. P. GLENDENING, JR.,
Acting Secretary.

UNITED STATES OF AMERICA

BEFORE FEDERAL TRADE COMMISSION

Commissioners: James M. Mead, Chairman, William A. Ayres, Lowell B. Mason, John Carson, Stephen J. Spingarn.

Docket No. 5508

In the Matter of American Iron & Steel Institute, an incorporated trade association, its directors and officers; and United States Steel Corporation and the following of its subsidiaries, American Bridge Company, the American Steel & Wire Co. of New Jersey, Carnegie-Illinois Steel Corporation, Columbia Steel Company, Geneva Steel Company, National Tube Company, Tennessee Coal, Iron & Railroad Company, and Virginia Bridge Company; Bethlehem Steel Corporation and the following of its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Company; Republic Steel Corporation and its controlled company, Truscon Steel Company; the American Rolling Mill Company and its subsidiary, Sheffield Steel Corporation of Ohio; National Steel Corporation and the following of its subsidiaries, Weirton Steel Company and Great Lakes Steel Company; Inland Steel Company and its subsidiary, Milcor Steel Company; the Youngstown Sheet & Tube Company; Jones & Laughlin Steel Corporation; Wheeling Steel Corporation; Colorado Fuel and Iron Corporation; Crucible Steel Company of America; Pittsburgh Steel Company; Sharon Steel Corporation; Alan Wood Steel Company; Acme Steel Co.; Agaloy Tubing Co.; Allegheny Ludlum Steel Corp.; American Chain & Cable Co., Inc.; Atlantic Steel Co.; the Atlantic Wire Co.; the Babcock & Wilcox Tube Co.; Bliss & Laughlin, Inc.; Continental-United Industries Company, Inc.; Buffalo Bolt Co.; Bundy Tubing Co.; A. M. Byers Co.; the Carpenter Steel Co.; Central Iron and Steel Co.; Chicago Steel & Wire Co.; Columbia

Steel & Shafting Co.; Columbia Tool Steel Co.; Compressed Steel Shafting Co.; Connors Steel Co.; Continental Steel Corp.; Copperweld Steel Co.; the Cuyahoga Steel & Wire Co.; Detroit Steel Corp.; Henry Disston & Sons, Inc.; Eastern Stainless Steel Corp.; Edgewater Steel Co.; Empire Steel Corp.; Firth Sterling Steel & Carbide Corp.; Follansbee Steel Corp.; Fretz-Moon Tube Co., Inc.; Granite City Steel Co.; Griffin Manufacturing Co.; Harrisburg Steel Corp.; International Detrola Corp.; Joslyn Manufacturing & Supply Co.; Judson Steel Corp.; Keystone Drawn Steel Co.; Keystone Steel & Wire Co.; Laclede Steel Co.; Latrobe Electric Steel Co.; Lukens Steel Co.; the Mahoning Valley Steel Co.; the Medart Co.; Mercer Tube and Manufacturing Co.; the Midvale Co.; Moltrup Steel Products Co.; National Standard Co.; the National Supply Co.; Northwestern Steel & Wire Co.; Pacific States Steel Corp.; the Phoenix Iron Co.; Pittsburgh Tool Steel Wire Co.; Pittsburgh Tube Co.; the Pollak Steel Co.; Reeves Steel and Mfg. Co.; John A. Roebling's Sons Co.; Rotary Electric Steel Co.; the Standard Tube Co.; Superior Steel Corp.; Sweet's Steel Co.; the Thomas Steel Co.; the Timken Roller Bearing Co.; Universal Cyclops Steel Corp.; Vanadium-Alloys Steel Co., and its subsidiaries, Anchor Drawn Steel Co.; Vulcan Crucible Steel Co.; Washington Steel Corp.; Western Automatic Machine Screw Co.; Wheatland Tube Co.; Wisconsin Steel Co.; Worth Steel Co.; and Wyckoff Steel Co.

FINDINGS AS TO THE FACTS AND CONCLUSION

Pursuant to the provisions of the Federal Trade Commission Act the Federal Trade Commission, on November 13, 1947, issued and subsequently served its amended complaint upon the respondents named in the caption hereof, charging them with the use of unfair methods of competition and unfair and deceptive acts and practices in commerce, in violation of the provisions of that Act. After the filing of respondents' answers to said complaint, testimony and other evidence in support of the allegations of the complaint were introduced before a trial examiner of the Commission theretofore duly designated by it, and such testimony and other evidence were duly recorded and filed in the office of the Commission. After counsel supporting the complaint rested their case, a proposal for the settlement of this proceeding was submitted by all of the respondents herein except those as to whom the Commission has determined the complaint should be dismissed, said proposal for settlement having been accepted and recommended by the Director, Bureau of Antimonopoly, and the Assistant Director of that Bureau and Chief of the Division of Investigation and Litigation, of the Commission. The Commission, being of the opinion that said proposal for settlement provided for an adequate and appropriate disposition of this proceeding, and that it would be in the public interest to accept same, on June 15, 1951, entered an order "tentatively accepting proposal for settlement; rejecting previously submitted proposal for settlement; providing for the issuance of a tentative decision and affording interested parties an opportunity to file memoranda or briefs with respect thereto; denying motion for leave to adduce additional evidence; withdrawing case from trial examiner and closing the record for the reception of evidence; and dismissing the complaint as to certain respondents" and issued its tentative decision consisting of findings as to the facts, conclusion and order to cease and desist in the form submitted with said proposal for settlement. No reasons having been presented, within the time provided therefor, as to why said tentative decision should not be entered as the Commission's final decision herein, and the aforesaid tentative order becoming by its terms an order of the Commission upon the issuance by the Commission of said tentative decision as its final decision herein, this matter came on for final hearing before the Commission upon the amended complaint, answers thereto, testimony and other evidence in support of the allegations of the complaint, and the proposal for settlement, which by agreement of the parties was amended to give effect to a change in the corporate name of one of the respondents and to correct an error as to the State of incorporation of another of the corporate respondents; and the Commission, having duly considered the matter and being now fully advised in the premises, finds that this proceeding is in the interest of the public and makes this its findings as to the facts and its conclusion drawn therefrom.

FINDINGS AS TO THE FACTS

PARAGRAPH ONE: The States of incorporation and locations of an office or principal place of business of the following-named corporate respondents are, respectively, as follows:

Name of corporation	State of incorporation	Office or principal place of business
American Iron and Steel Institute	New York	350 5th Avenue, New York, N. Y.
United States Steel Corp	New Jersey	71 Broadway, New York, N. Y.
The American Steel & Wire Company of New Jersey.	do	Rockefeller Bldg., Cleveland, Ohio.
United States Steel Co. (designated in the complaint as Carnegie-Illinois Steel Corp., but which corporate name was changed on Dec. 30, 1950, to that of United States Steel Co.).	do	Carnegie Bldg., Pittsburgh, Pa.
Columbia Steel Co	Delaware	Russ Bldg., San Francisco, Calif.
Geneva Steel Co	do	Geneva, Utah.
National Tube Co	New Jersey	Frick Bldg., Pittsburgh, Pa.
Tennessee Coal, Iron & RR. Co	Alabama	Brown-Marx Bldg., Birmingham, Ala.
Bethlehem Steel Corp	Delaware	Wilmington, Del.
Bethlehem Pacific Coast Steel Corp	do	20th and Illinois Sts., San Francisco Calif.
Bethlehem Steel Co	Pennsylvania	Bethlehem, Pa.
Republic Steel Corp	New Jersey	Republic Bldg., Cleveland, Ohio.
Truscon Steel Co	Michigan	Republic Bldg., Cleveland, Ohio.
The Youngstown Sheet & Tube Co	Ohio	Stambaugh Bldg., Youngstown, Ohio.
Jones & Laughlin Steel Corp	Pennsylvania	Jones & Laughlin Bldg., Pittsburgh, Pa.
Armco Steel Corp. (name formerly the American Rolling Mill Co.).	Ohio	703 Curtis St., Middletown, Ohio.
Sheffield Steel Corporation of Ohio	do	Sheffield Station, Kansas City, Mo.
National Steel Corp	Delaware	Grant Bldg., Pittsburgh, Pa.
Weirton Steel Co	West Virginia	Weirton, W. Va.
Great Lakes Steel Corp	Delaware	Detroit, Mich.
Inland Steel Co	do	38 South Dearborn St., Chicago, Ill.
Inland Steel Products Co. (name formerly Milcor Steel Co.).	do	38th and Burnham Sts., Milwaukee, Wis.
Wheeling Steel Corp	do	Wheeling, W. Va.
The Colorado Fuel & Iron Corp	Colorado	Continental Oil Bldg., Denver, Colo.
Claymont Steel Corp. (name formerly Worth Steel Co.).	Delaware	Claymont, Del.
Crucible Steel Company of America	New Jersey	New York, N. Y.
Pittsburgh Steel Co	Pennsylvania	Pittsburgh, Pa.
Sharon Steel Corp	do	Sharon, Pa.
Alan Wood Steel Corp	do	Conshohocken, Pa.
Acme Steel Co	Illinois	2840 Archer Ave., Chicago, Ill.
Allegheny Ludlum Steel Corp	Pennsylvania	Brackenridge, Pa.
American Chain & Cable Co., Inc	New York	230 Park Ave., New York, N. Y.
Atlantic Steel Co	Delaware	Fulton County, Ga.
The Babcock & Wilcox Tube Co	Pennsylvania	Beaver Falls, Pa.
Bliss & Laughlin, Inc	Delaware	Harvey, Ill.
Continental Copper & Steel Industries, Inc. (name formerly Continental-United Industries Co., Inc.).	do	345 Madison Ave., New York, N. Y.
Buffalo Eclipse Corp. (name formerly Buffalo Bolt Co.).	New York	North Tonawanda, N. Y.
A. M. Byers Co	Pennsylvania	Clark Bldg., Pittsburgh, Pa.
The Carpenter Steel Co	New Jersey	101 West Bern St., Reading, Pa.
Central Iron & Steel Co	Pennsylvania	Harrisburg, Pa.
Columbia Steel & Shafting Co	do	East Carnegie, Pa.
Columbia Tool Steel Co	Illinois	Lincoln Highway and State St., Chicago Heights, Ill.
Compressed Steel Shafting Co	Massachusetts	1587 Hyde Park Ave., Readville, Mass.
Connors Steel Co	Delaware	Birmingham, Ala.
Continental Steel Corp	Indiana	Kokomo, Ind.
Copperweld Steel Co	Pennsylvania	Warren, Ohio.
The Cuyahoga Steel & Wire Co	Ohio	Longwood Ave., Maple Heights, Cleveland, Ohio.
Detroit Steel Corp	Michigan	1025 South Oakwood Ave., Detroit, Mich.
Henry Disston & Sons, Inc	Pennsylvania	Tacony, Philadelphia, Pa.
Edgewater Steel Co	do	Borough of Oakmont, Allegheny County, Pa.
Firth Sterling Steel & Carbide Corp	do	McKeesport, Pa.
Follansbee Steel Corp	Delaware	3d and Liberty Aves., Pittsburgh, Pa.
Fretz-Moon Tube Co., Inc	Pennsylvania	Borough of East Butler, Pa.
Granite City Steel Co	Delaware	20th and Madison Aves., Granite City, Ill.
Griffin Manufacturing Co	Pennsylvania	Cherry and Union Sts., Erie, Pa.
Newport Steel Corp. (name formerly International Detrola Corp.).	Indiana	Beard Ave. at Chatfield, Detroit, Mich.
Joslyn Manufacturing & Supply Co	Illinois	20 North Wacker Dr., Chicago, Ill.
Judson Steel Corp	California	4200 Eastshore Highway, Emeryville, Calif.

Name of corporation	State of incorporation	Office or principal place of business
Keystone Drawn Steel Co	Pennsylvania	Spring City, Pa.
Keystone Steel & Wire Co	Illinois	Peoria, Ill.
Laclede Steel Co	Missouri	Arcade Bldg., St. Louis, Mo.
Latrobe Electric Steel Co	Pennsylvania	Latrobe, Pa.
Lukens Steel Co	do	Coatesville, Pa.
Mahoning Valley Steel Co	Ohio	Niles, Ohio.
The Medart Co	Missouri	100 Potomac St., St. Louis, Mo.
Mercer Tube & Manufacturing Co	Delaware	200 Clark Ave., Sharon, Pa.
The Midvale Co	do	4320 Wissahickon Ave., Nicetown, Philadelphia, Pa.
Moltrup Steel Products Co	Pennsylvania	Beaver Falls, Pa.
National-Standard Co	Michigan	Niles, Mich.
The National Supply Co	Pennsylvania	330 Grant St., Pittsburgh, Pa.
Northwestern Steel & Wire Co	Illinois	Sterling, Ill.
Pacific States Steel Corp	California	Niles, Calif.
Pittsburgh Tool Steel Wire Co	Pennsylvania	Monaca, Pa.
Pittsburgh Tube Co	Delaware	323 4th Ave., Pittsburgh, Pa.
The Pollak Steel Co	Ohio	820 Temple Bar Bldg., Cincinnati, Ohio.
Reeves Steel & Manufacturing Co	do	Dover, Ohio.
John A. Roebling's Sons Co	New Jersey	640 South Broad St., Trenton, N. J.
Rotary Electric Steel Co	Delaware	21400 Mound Rd., Warren Township, Mich.
The Standard Tube Co	Michigan	14600 Woodward Ave., Highland Park, Mich.
Superior Steel Corp	Virginia	Pittsburgh, Pa.
Sweet's Steel Co	Pennsylvania	Williamsport, Pa.
The Thomas Steel Co	Ohio	Warren, Ohio.
The Timken Roller Bearing Co	do	1835 Deuber Ave., SW., Canton, Ohio.
Universal-Cyclops Steel Corp	Pennsylvania	Bridgeville, Pa.
Vanadium-Alloys Steel Co	do	Latrobe, Pa.
Anchor Drawn Steel Co	do	Do.
Vulcan-Crucible Steel Co	do	Aliquippa, Pa.
The Western Automatic Machine Screw Co	Connecticut	900 Foster Ave., Elyria, Ohio.
Wheatland Tube Co	Pennsylvania	Philadelphia, Pa.
Wisconsin Steel Co	Illinois	180 North Michigan Ave., Chicago, Ill.
Wyckoff Steel Co	Pennsylvania	Pittsburgh, Pa.

The above-listed corporations are hereinafter referred to as the respondents.

The Commission has dismissed this proceeding as to the respondent The Phoenix Iron Company, a Pennsylvania corporation with its office and principal place of business at 121 Bridge Street, Phoenixville, Pennsylvania, which, on September 30, 1947, sold all of its steel producing facilities and withdrew permanently from the business of producing and selling steel products.

The Commission has also dismissed this proceeding as to respondent E. S. Liquidating Company (formerly Empire Steel Corporation), an Ohio corporation with its office and principal place of business in Mansfield, Ohio, which is in the process of dissolution.

The record does not show that the following-named respondent companies have participated in the practices hereinafter found, and they are not included hereinafter in the term, respondents:

Name of corporation	State of incorporation	Office or principal place of business
Agaloy Tubing Co., Inc	New Jersey	Wheel St., Springfield, Ohio.
American Bridge Co	do	Frick Bldg., Pittsburgh, Pa.
Atlantic Wire Co	Connecticut	No. 1 Church St., Branford, Conn.
Bundy Tubing Co	Michigan	Hern at Springfield, Detroit, Mich.
Chicago Steel & Wire Co	Illinois	10257 Torrence Ave., Chicago, Ill.
Eastern Stainless Steel Corp	Maryland	Baltimore, Md.
Harrisburg Steel Corp	Pennsylvania	Harrisburg, Pa.
Virginia Bridge Co	New Jersey	Roanoke, Va.
Washington Steel Corp	Pennsylvania	Washington, Pa.

PARAGRAPH TWO. With the exception of the American Iron and Steel Institute, the respondents, or one or more of their respective subsidiaries named in Paragraph One, are engaged in the production, sale and distribution of one or more of the steel products listed below, and, in the course of the sale and distribution thereof, each of them competes with others of said respondents, except to the extent that competition may have been restrained, lessened or destroyed by the acts, practices, methods, policies and other matters hereinafter described, and each of them in the regular course and conduct of its business sells and delivers one or more of such steel products or causes them to be sold and delivered or trans-

ports them or causes them to be transported from the State in which such steel products are produced to purchasers thereof at locations outside the State in which such steel products are purchased and each of them regularly has maintained and now maintains a constant course of trade and commerce in one or more steel products in and among various States of the United States and is engaged in interstate commerce within the meaning and intent of Section 5 of the Federal Trade Commission Act.

The following steel products (not including stainless steel products) are involved in this proceeding:

Alloy Steel:
- Ingots
- Billets, blooms, slabs
- Bar shapes
- Hot-rolled strip
- Cold-rolled strip
- Hot-rolled bars
- Cold-finished bars
- Plates
- Standard structural shapes
- Seamless mechanical tubing
- Seamless pressure tubing

Bars, Carbon:
- Hot-rolled and small shapes
- Reinforcing (new billet)
- Reinforcing (rail steel)
- Cold-finished
- Merchant (rail steel)

Clad Steel:
- Nickel, Inconel, Monel—carbon plates

High-Strength Low Alloy:
- Hot-rolled sheets
- Cold-rolled sheets
- Galvanized sheets
- Hot-rolled strip
- Cold-rolled strip
- Bars and small shapes
- Plates
- Standard structural shapes
- Wide flange beams

Pipe and Tubing:
- Pipe, including oil country
- Seamless mechanical tubing
- Seamless pressure tubing
- Mechanical electric-weld tubing

Plates, Structural, Carbon:
- Plates
- Floor plates
- Standard structural shapes
- Wide flange beams

Plates, Structural, Carbon—Con.
- Sheet piling
- Bearing piles

Rails and Railroad Accessories:
- Light (new billet)
- Light (rail steel)
- Track spikes

Semi-Finished, Carbon:
- Ingots—forging
- Billets, blooms, slabs—rerolling quality
- Billets, blooms, slabs—forging quality
- Skelp
- Tube rounds
- Wire rods

Sheets, Carbon:
- Hot-rolled, 18 gauge and heavier
- Hot-rolled annealed, 19 gauge and lighter
- Cold-rolled
- Galvanized
- Enameling
- Long ternes
- Electrical

Strip Carbon:
- Hot-rolled
- Cold-rolled
- Electrical, coils
- Tin, terne and black plate

Tool Steel

Wire and Related Products:
- Manufacturers bright, low carbon
- Spring, high carbon
- Nails and staples
- Merchant quality wire
- Barbed wire
- Woven fence
- Bale ties
- Fence posts
- Flat wire

The term "steel products" as hereinafter used shall be deemed to mean some or all of such steel products.

PARAGRAPH THREE. Each respondent, through its direct membership or through the membership of a wholly owned subsidiary or its parent corporation, or a wholly owned subsidiary of its parent corporation, as of July 1, 1947, actively participated in or supported, in cooperation with other respondents, the respondent Institute and its plans, programs and activities.

The steel industry is one of the basic industries of the Nation. At the time that the amended complaint was filed, the producer respondents in the aggregate produced and sold more than 85 percent of the steel products that were produced and sold in the United States. Such producer respondents include substantially all of the corporate members of the respondent Institute which own, control or operate steel producing facilities in the United States. Steel products which they produce and sell are regularly used in the production of automobiles, agricultural implements, tools and machinery, hardware, plumbing supplies, metal cans and containers, railroad equipment, homes, buildings,

public buildings, bridges, dams, and other products and things, and are of great importance to the public generally. The Federal, State and Municipal Governments of the Nation purchase large quantities of steel products annually.

PARAGRAPH FOUR. Respondents, from the close of NRA in May 1935 (or, if organized thereafter, from the respective dates of their organization), to the issuance of the amended complaint in this matter on November 13, 1947, in connection with the interstate sale of steel products, have engaged in the acts and practices as set out in the following paragraphs, Paragraph Five through Paragraph Twenty-One. In making the following findings, the Commission recognizes that some of the respondents may not have engaged in all the separate acts, practices, methods and policies hereinafter described.

PARAGRAPH FIVE. Steel products are, and for many years have been, manufactured and sold in many thousands of different combinations of size, gauge, chemical composition, finish, quality and other characteristics. The respondent Institute, some of the producer respondents, and also various public and private agencies—among them the National Bureau of Standards, the Army Bureau of Ordnance, the Society of Automotive Engineers, the American Society for Testing Materials, and the American Society for Metals—have for many years studied the various qualities, grades and uses of steel and steel products and have classified and described and published information concerning the various steel products and their nature and characteristics. In large part, the information so published consists of analytical statements of matters which have been developed and established over the years through usage, custom and practice among steel producers and users. Technical committees of the respondent Institute have also developed and published information concerning many new steels which has been made available to the consuming public.

PARAGRAPH SIX. Steel products are commonly classified into product groups related to the size and shape of the product, such as bars, structural shapes, plates, and sheets. Product groups are generally subdivided between carbon steel products and alloy steel products. Each steel product group has a common name which is generally understood and used not only by steel producers, but also by steel consumers. Similarly, there are common names and commonly accepted standards for all significant variations in steel product classifications. The names and standards thus used by steel producers and steel consumers have been developed, improved and made more precise and useful by technical committees of the respondent Institute and by other public and private agencies such as those named or referred to above in Paragraph Five. In selling their respective steel products, steel producers, including the producer respondents, have long made use of such common names and standards.

PARAGRAPH SEVEN. Generally speaking, the announced price of any particular steel product is made up of two principal elements. The first is the "base price" or "price base," which is the announced price of a defined classification of products. The other element consists of the "extras" and "deductions" announced as additions to or deductions from the base price in respect of certain variations of the steel product.

PARAGRAPH EIGHT. Respondents, through Committees of respondent Institute and otherwise, defined and described the limits of steel product groups. The respondents used and followed those definitions and descriptions in the pricing of the products sold by them, respectively.

PARAGRAPH NINE. Respondents, through Committees of respondent Institute, defined and described the ranges of steel products within product groups. The respondents used and followed those definitions and descriptions in determining what products would be sold by them, respectively, at base prices without any extra charge or deduction.

PARAGRAPH TEN. Respondents, through Committees of respondent Institute, classified ranges of products, quantities and services. The respondent used and followed such classification in their respective price announcements as the definitions and descriptions of products and services for which extra charges or deductions would be made.

PARAGRAPH ELEVEN. The "base prices" and the "extras" and "deductions" announced by a respondent as applicable to any particular product at any particular place and time (as distinguished from the prices at which steel products were actually sold) were nearly always the same as those announced as applicable to steel products of the same classification at the same time and place by other respondents.

PARAGRAPH TWELVE. Prior to 1940, respondents jointly compiled with respect to various steel products average industrywide costs of performing the opera-

tions necessary to produce products not within the range of products sold at base prices, the costs of performing services other than those included in the production and handling of products sold at base prices, and averaged industrywide costs of producing and handling steel products in quantities different from those sold at base prices. The actual costs of performing these different functions varied from mill to mill depending upon the efficiency of the mill and varied from time to time depending upon the size of the particular product run and other cost factors.

PARAGRAPH THIRTEEN. The "extras" or "deductions" factors as announced by respondents were nearly always the same during any given period of time for any service, characteristic or quantity. Whenever the aforesaid averaged industrywide cost factors relating to different services or differences in material, necessary to produce different services, quantities or characteristics, were compiled, they have been used by respondents as a basis for determining and announcing their extra charges to be added to or deductions to be made from their "base" or "base prices."

PARAGRAPH FOURTEEN. Each respondent in its announcements of base prices has specified, not only an amount in terms of dollars and cents for a specified steel product, but has also specified that such amount was applicable to such product at a specified geographical point. Such geographical point or points were commonly referred to and used as "basing points." Each respondent did not necessarily announce prices at each of the points, but each did announce prices at or announce a willingness to equalize its prices with prices announced at certain of these points. Furthermore, in numerous instances, some respondents did not in their price announcements specify that their "base" or "base prices" had application at one or more geographical points at which they produced for sale and from which they shipped steel products.

PARAGRAPH FIFTEEN. Respondents quoted their prices of steel products on a basis of what they would cost the purchasers thereof at delivery points. These delivered quotations were, with exceptions, calculated by adding to the base price plus extras or minus deductions a freight-rate factor to the place of delivery from the basing point nearest freightwise to the place of delivery.

PARAGRAPH SIXTEEN. Respondents, through the respondent Institute, collected and compiled lists of freight rate factors, which included freight rate factors from certain of the basing points to many of the consuming points for steel products. These lists of freight rate factors were printed in the form of books designated freight rate books which were sold to the respondents and others by the respondent Institute for use in calculating the amount to be added to the base price plus extras or minus deductions to determine the delivered quotation. The freight rate tariffs published by the common carriers are complex. Due to these complexities, including alternate routes, switching charges, etc., experts in the field will often arrive at different rates for the same shipment. Respondents, by the use of these books, could quote, and generally did quote, identical amounts for the delivery cost factor of their delivered quotations.

PARAGRAPH SEVENTEEN. Beginning during the period of the N. R. A. Steel Code and continuing until the time of the complaint herein respondent sellers have imposed a charge equal to 35% of the applicable all rail freight rate to the railroad freight station nearest to the point of use of purchasers desiring to use truck facilities for the transportation of steel products when delivery was taken at the plant.

PARAGRAPH EIGHTEEN. Beginning during the period of the N. R. A. Steel Code and continuing until the time of the complaint herein producer respondents have used arbitrary identical switching charges on purchases of steel products for delivery at basing points. These charges were made in lieu of actual switching charges and in some instances were more than, and in other instances less than, the actual switching charges. In most cases, such actual switching charges were practically impossible to determine in advance.

PARAGRAPH NINETEEN. Respondents, through the Traffic Committee of the respondent Institute, attempted to restrict the extension by the Interstate Commerce Commission of the fabrication in transit privileges available to purchasers of steel products.

PARAGRAPH TWENTY. Producer respondents which bid for governmental business in many instances have made identical delivered quotations for steel products to governmental agencies, State and Federal. These identical quotations have been made in sealed bids submitted to State and Federal agencies, each bidder representing, expressly or impliedly, that its sealed bid was made on the

basis of independent action without knowledge of the prices, terms and conditions of sale which other bidders would submit, except knowledge of the previous prices and terms, methods and practices of selling of other potential bidders. Such identity has prevailed in the submission of bids, with respect to any given delivery point, although the place of production of the steel products, proposed for delivery to such point, varied widely among the respondent bidders. Use of the acts, practices, methods and policies hereinbefore found and described promoted and otherwise contributed to such identity. The calculation of these quotations involved the use of identical base prices, extra charges, terms and conditions of sale, basing points and delivery charges.

PARAGRAPH TWENTY-ONE. On June 6, 1935, the members of the Iron and Steel Industry adopted a formal resolution pursuant to the terms of which they ratified a similar resolution adopted by the Board of Directors of respondent Institute on June 3, 1935, to the effect that each of said members declared its intention of maintaining as stated therein "the standards of fair competition" which had been described in the N. R. A. Steel Code. The standards of fair competition thus referred to provided for and included the practices which are hereinbefore described in Paragraphs Five through Twenty.

The resolution of June 3, 1935, referred to above is quoted as follows:

> "WHEREAS the Chairman of the National Industrial Recovery Board has issued a statement with regard to the decision of the United States Supreme Court in the Schechter Poultry Corporation case in which he expressed the hope 'that all employers heretofore operaing under approved codes and all their employees will cooperate in maintaining those standards of fair competition in commercial and labor relations which have been written into the codes with practically universal sanction, and which represent a united effort to eliminate dishonest, fraudulent trade practices and unfair competition in overworking and underpaying labor';
>
> "*Resolved* that it is hereby declared to be the sentiment of the Board of Directors of the American Iron and Steel Institute that the individual members of the Iron and Steel Industry, acting voluntarily, during the present uncertainty, maintain the present rates of pay and maximum hours of labor and the standards of fair competition which are set forth in the Steel Code, and that the members of the Industry continue to protect the employees' rights of collective bargaining;"

The resolution of June 6, 1935, referred to above is quoted as follows:

> "*Resolved*, that the members of the Iron and Steel Industry in General Meeting assembled this sixth day of June, 1935, hereby unanimously ratify the resolution of the Board of Directors of American Iron and Steel Institute, adopted June 3, 1935, and each of us hereby declares that the Company which he represents is in favor of supporting the position taken by such resolution and that it is the intention of such Company, acting individually and voluntarily, in so far as it may do so, during the present uncertainty to maintain the present rates of pay and maximum hours of labor and the standards of fair competition which are described in the Steel Code, and that such Company will continue to protect the employees' rights of collective bargaining."

At said meeting held on June 6, 1935, among those present were officers of the respondent Institute and an officer or representative of each of the following of its members:

Alan Wood Steel Company
Armco Steel Corporation
Atlantic Steel Company
Bethlehem Steel Company
A. M. Byers Company
Columbia Steel & Shafting Company
Edgewater Steel Company
Firth Sterling Steel & Carbide Corporation
Granite City Steel Company
Inland Steel Company
Jones & Laughlin Steel Corporation
Keystone Steel & Wire Company
Laclede Steel Company
The Midvale Company
Moltrup Steel Products Company
National Steel Corporation
Pittsburgh Tube Company
Republic Steel Corporation
The Timken Roller Bearing Company
United States Steel Corporation
Vulcan-Crucible Steel Company
Wheeling Steel Corporation
Wyckoff Steel Company
The Youngstown Sheet and Tube Company

In addition to those named above, there were also present at said meeting an officer or representative of each of the following respondents which were not members of the respondent Institute on June 6, 1935:

The American Steel and Wire Company of New Jersey
Bethlehem Steel Corporation
United States Steel Company (designated in the complaint as Carnegie-Illinois Steel Corporation, but which corporate name was changed on December 30, 1950, to that of United States Steel Company)
Columbia Steel Company
Great Lakes Steel Company
Lukens Steel Company
Mahoning Valley Steel Company
National Tube Company
Northwestern Steel and Wire Company
Sheffield Steel Corporation of Ohio
Tennessee Coal, Iron and Railroad Company
Truscon Steel Company
Weirton Steel Company

PARAGRAPH TWENTY-TWO: The acts and practices hereinbefore described and found, taken together and under the circumstances stated, have tended to lessen competition, are oppressive to the public interest and unfair within the intent and meaning of the Federal Trade Commission Act.

CONCLUSION

The acts and practices hereinbefore described and found, if not checked, would unduly suppress competition. Therefore, the public interest and the provisions of the Federal Trade Commission Act require that the respondents should be restrained as provided in the annexed order.

By the Commission.

[SEAL]

JAMES M. MEAD, *Chairman.*

Issued: August 10, 1951.

Attest:

D. C. DANIEL, *Secretary.*

UNITED STATES OF AMERICA

BEFORE FEDERAL TRADE COMMISSION

Commissioners: James M. Mead, Chairman, William A. Ayres, Lowell B. Mason, John Carson, Stephen J. Spingarn.

Docket No. 5508

In the Matter of American Iron & Steel Institute, an incorporated trade association, its directors and officers; and United States Steel Corporation and the following of its subsidiaries, American Bridge Company, The American Steel & Wire Co. of New Jersey, Carnegie-Illinois Steel Corporation, Columbia Steel Company, Geneva Steel Company, National Tube Company, Tennessee Coal, Iron & Railroad Company, and Virginia Bridge Company; Bethlehem Steel Corporation and the following of its subsidiaries, Bethlehem Pacific Coast Steel Corporation, Bethlehem Steel Company; Republic Steel Corporation and its controlled company, Truscon Steel Company; The American Rolling Mill Company and its subsidiary, Sheffield Steel Corporation of Ohio; National Steel Corporation and the following of its subsidiaries, Weirton Steel Company and Great Lakes Steel Company; Inland Steel Company and its subsidiary, Milcor Steel Company; The Youngstown Sheet & Tube Company; Jones & Laughlin Steel Corporation; Wheeling Steel Corporation; Colorado Fuel and Iron Corporation; Crucible Steel Company of America; Pittsburgh Steel Company; Sharon Steel Corporation; Alan Wood Steel Company; Acme Steel Co.; Agaloy Tubing Co.; Allegheny Ludlum Steel Corp.; American Chain & Cable Co., Inc.; Atlantic Steel Co.; The Atlantic Wire Co.; The Babcock & Wilcox Tube Co.; Bliss & Laughlin, Inc.; Continental-United Industries Company, Inc.; Buffalo Bolt Co.; Bundy Tubing Co.; A. M. Byers Co.; The Carpenter Steel Co.; Central Iron and Steel Co.; Chicago Steel & Wire Co.; Columbia Steel & Shafting Co.; Columbia Tool Steel Co.; Compressed Steel

Shafting Co.; Connors Steel Co.; Continental Steel Corp.; Copperweld Steel Co.; The Cuyahoga Steel & Wire Co.; Detroit Steel Corp.; Henry Disston & Sons, Inc.; Eastern Stainless Steel Corp.; Edgewater Steel Co.; Empire Steel Corp.; Firth Sterling Steel & Carbide Corp.; Follansbee Steel Corp.; Fretz-Moon Tube Co., Inc.; Granite City Steel Co.; Griffin Manufacturing Co.; Harrisburg Steel Corp.; International Detrola Corp.; Joslyn Manufacturing & Supply Co.; Judson Steel Corp.; Keystone Drawn Steel Co.; Keystone Steel & Wire Co.; Laclede Steel Co.; Latrobe Electric Steel Co.; Lukens Steel Co.; The Mahoning Valley Steel Co.; The Medart Co.; Mercer Tube and Manufacturing Co.; The Midvale Co.; Moltrup Steel Products Co.; National Standard Co.; The National Supply Co.; Northwestern Steel & Wire Co.; Pacific States Steel Corp.; The Phoenix Iron Co.; Pittsburgh Tool Steel Wire Co.; Pittsburgh Tube Co.; The Pollak Steel Co.; Reeves Steel and Mfg. Co.; John A. Roebling's Sons Co.; Rotary Electric Steel Co.; The Standard Tube Co.; Superior Steel Corp.; Sweet's Steel Co.; The Thomas Steel Co.; The Timken Roller Bearing Co.; Universal Cyclops Steel Corp.; Vanadium-Alloys Steel Co. and its subsidiary, Anchor Drawn Steel Co.; Vulcan Crucible Steel Co.; Washington Steel Corp.; Western Automatic Machine Screw Co.; Wheatland Tube Co.; Wisconsin Steel Co.; Worth Steel Co.; and Wyckoff Steel Co.

ORDER TO CEASE AND DESIST

This proceeding having been heard by the Federal Trade Commission upon the amended complaint of the Commission, the answers thereto of the respondents, and upon testimony and other evidence to support the allegations of said complaint taken before an Examiner of the Commission theretofore duly designated; and, the Commission having made its findings as to the facts and its conclusion and being of the opinion that it is in the public interest that it issue its order under the Federal Trade Commission Act, the Commission hereby does so, as follows:

I. IT IS ORDERED that respondents American Iron and Steel Institute, a membership corporation organized under the laws of the State of New York, and its directors, its officers, and United States Steel Corporation, a corporation, the American Steel and Wire Company of New Jersey, a corporation, United States Steel Company (designated in the complaint as Carnegie-Illinois Steel Corporation, but which corporate name was changed on December 30, 1950, to that of United States Steel Company), a corporation, Columbia Steel Company, a corporation, Geneva Steel Company, a corporation, National Tube Company, a corporation, Tennessee Coal, Iron and Railroad Company, a corporation, Bethlehem Steel Corporation, a corporation, Bethlehem Pacific Coast Steel Corporation, a corporation, Bethlehem Steel Company, a corporation, Republic Steel Corporation, a corporation, Truscon Steel Company, a corporation, the Youngstown Sheet and Tube Company, a corporation, Jones & Laughlin Steel Corporation, a corporation, Armco Steel Corporation (name formerly the American Rolling Mill Company), a corporation, Sheffield Steel Corporation of Ohio, a corporation, National Steel Corporation, a corporation, Weirton Steel Company, a corporation, Great Lakes Steel Corporation, a corporation, Inland Steel Company, a corporation, Inland Steel Products Company (name formerly Milcor Steel Company), a corporation, Wheeling Steel Corporation, a corporation, the Colorado Fuel and Iron Corporation, a corporation, Claymont Steel Corporation (name formerly Worth Steel Company) a corporation, Crucible Steel Company of America, a corporation, Pittsburgh Steel Company, a corporation, Sharon Steel Corporation, a corporation, Alan Wood Steel Company, a corporation, Acme Steel Company, a corporation, Allegheny Ludlum Steel Corporation, a corporation, American Chain and Cable Company, Inc., a corporation, Atlantic Steel Company, a corporation, the Babcock & Wilcox Tube Company, a corporation, Bliss & Laughlin, Incorporated, a corporation, Continental Copper & Steel Industries, Inc. (name formerly Continental-United Industries Co., Inc.), a corporation, Buffalo Eclipse Corporation (name formerly Buffalo Bolt Company), a corporation, A. M. Byers Company, a corporation, the Carpenter Steel Company, a corporation, Central Iron and Steel Company, a corporation, Columbia Steel & Shafting Company, a corporation, Columbia Tool Steel Company, a corporation, Compressed Steel Shafting Company, a corporation, Connors Steel Company, a corporation, Continental Steel Corporation, a corporation, Copperweld Steel Company, a corporation, the Cuyahoga Steel & Wire Company, a corporation, Detroit Steel Corporation, a corporation, Henry Disston & Sons, Inc., a corporation, Edgewater Steel Company, a corporation, Firth Sterling Steel & Carbide Corporation, a cor-

poration, Follansbee Steel Corporation, a corporation, Fretz-Moon Tube Company, Incorporated, a corporation, Granite City Steel Company, a corporation, Griffin Manufacturing Co., a corporation, Newport Steel Corporation (name formerly International Detrola Corporation), a corporation, Joslyn Mfg. and Supply Co., a corporation, Judson Steel Corporation, a corporation, Keystone Drawn Steel Company, a corporation, Keystone Steel & Wire Company, a corporation, Laclede Steel Company, a corporation, Latrobe Electric Steel Company, a corporation, Lukens Steel Company, a corporation, Mahoning Valley Steel Company, a corporation, the Medart Company, a corporation, Mercer Tube & Manufacturing Co., a corporation, the Midvale Company, a corporation, Moltrup Steel Products Company, a corporation, National-Standard Company, a corporation, the National Supply Company, a corporation, Northwestern Steel and Wire Company, a corporation, Pacific States Steel Corporation, a corporation, Pittsburgh Tool Steel Wire Company, a corporation, Pittsburgh Tube Company, a corporation, the Pollak Steel Company, a corporation, Reeves Steel and Manufacturing Company, a corporation, John A. Roebling's Sons Company, a corporation, Rotary Electric Steel Company, a corporation, the Standard Tube Company, a corporation, Superior Steel Corporation, a corporation, Sweet's Steel Company, a corporation, the Thomas Steel Company, a corporation, the Timken Roller Bearing Company, a corporation, Universal-Cyclops Steel Corporation, a corporation, Vanadium-Alloys Steel Company, a corporation, Anchor Drawn Steel Company, a corporation, Vulcan-Crucible Steel Company, a corporation, the Western Automatic Machine Screw Company, a corporation, Wheatland Tube Company, a corporation, Wisconsin Steel Company, a corporation, and Wyckoff Steel Company, a corporation, and their respective officers, agents, representatives and employees, in, or in connection with, the offering for sale, sale and distribution in interstate commerce of the steel products involved in this proceeding (hereinafter called steel products) do forthwith cease and desist from entering into any planned common course of action, understanding or agreement between any two or more of said respondents, or between any one or more of said respondents and others not parties hereto, and from cooperating in, carrying out or continuing any such planned common course of action, understanding or agreement, to do or perform any of the following things:

(1) Adopting, establishing, fixing or maintaining prices or any element thereof at which steel products shall be quoted or sold, including but not limited to base prices, the extras which shall be added to, or the deductions which shall be made from, any base price for any specified characteristic, or loading charge or delivery charge or terms of discount, credit, or other conditions of sale.

(2) Collecting, compiling, circulating or exchanging between or among respondents, or any of them, a list or lists of base prices or of prices by any other designation, or extra charges thereto or deductions therefrom for any specified characteristic or quantity of steel products or services connected therewith used or to be used in computing prices or price quotations of steel products; or using, directly or indirectly, as a factor in computing price quotations or in making, quoting or charging prices any such list or lists so collected, compiled, circulated or exchanged.

(3) Collecting, compiling, circulating or exchanging between or among respondents, or any of them, a list or lists of freight rate factors, transportation charges or other charges relating to transportation or loading or other services connected therewith, used or to be used in computing prices or price quotations of steel products, or using, directly or indirectly, as a factor in computing price quotations any such list or lists so collected, compiled, circulated or exchanged.

(4) Formulating, devising, adopting, establishing, fixing or maintaining methods or practices of quoting and selling steel products to railroads or other particular classes of customers.

(5) Quoting or selling steel products at prices calculated or determined pursuant to, or in accordance with, any system or formula which produces identical price quotations or prices or delivered costs, or which establishes a fixed relationship among price quotations or prices or delivered costs, or which prevents purchasers from securing any advantage in price in dealing with one or more of the respondents as against any of the other respondents.

(6) Failing to quote or to sell and deliver any steel products f. o. b. at the plant of manufacture thereof.

(7) Causing to be done any of the things described in the preceding subparagraphs (1) through (6) through action of respondent American Iron and Steel Institute or any subdivision or committee of said Institute or any individual, or other corporation or organization.

II. It Is Further Ordered that each of the respondents do forthwith cease and desist from acting, individually or otherwise, so as knowingly to contribute to the maintenance or operation of any planned common course of action, understanding or agreement between and among any two or more of the respondents or between any one or more of them and others not parties hereto through the commission of any of the acts, practices or things prohibited by subparagraphs (1) through (6) of Paragraph I of this order.

III. Provided, However, that, in interpreting and construing the foregoing provisions of this order, it is understood that:

(1) The Federal Trade Commission is not considering evidence of uniformity of prices or any element thereof of two or more sellers at any destination or destinations alone and without more as showing a violation of law.

(2) The Federal Trade Commission construes the phrase 'planned common course of action' and the word 'continuing' contained in this order as interpreted by the Supreme Court in *F. T. C.* v. *Cement Institute*, 333 U. S. 683, at page 728, and by the Court in *American Chain & Cable Co.* v. *F. T. C.* (CA 4th 1944), 139 F. 2d 622.

(3) The Federal Trade Commission is not acting to prohibit or interfere with delivered pricing or freight absorption as such when innocently and independently pursued, regularly or otherwise, with the result of promoting competition.

(4) The findings and the conclusion which the Federal Trade Commission has made in this case have been expressly set forth in the Findings as to the Facts and Conclusion that precede this order and are complete.

(5) Nothing contained in this order or the understandings in connection herewith shall be construed to affect (a) the duty, authority or power of the Federal Trade Commission under the provision of Section 5 (b) of the Federal Trade Commission Act to reopen this proceeding and alter, modify or set aside in whole or in part any provision of this order whenever in the opinion of the Federal Trade Commission conditions of fact or of law have so changed as to require such action or if the public interest shall so require, nor to prevent representatives of either the Federal Trade Commission or of the respondents or any of them from moving to so alter, modify or set aside in whole or in part any provision of this order; or (b) any such right as the respondents, or any of them, may have under the law to question or contest any such action by the Commission in so reopening this proceeding or in so altering, modifying or setting aside this order, either before the Commission or upon review or otherwise in any competent court.

IV. It Is Further Ordered that the respondents shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing, setting forth in detail the manner and form in which they have complied with this order.

By the Commission.

[seal] D. C. Daniel, *Secretary.*

Issued August 10, 1951.

United States of America Before Federal Trade Commission

At a regular session of the Federal Trade Commission, held at its office in the city of Washington, D. C., on the 3rd day of September A. D., 1948

Commissioners: Robert E. Freer, Chairman, Garland S. Ferguson, Ewin L. Davis, William A. Ayres, Lowell B. Mason.

Docket No. 5508

In the Matter of American Iron and Steel Institute et al.

Order Dismissing Amended Complaint as to Respondent E. S. Liquidating Company—Formerly Empire Steel Corporation

This matter came on to be heard in regular course upon motion filed March 16, 1948, amended May 10, 1948, by respondent E. S. Liquidating Company—formerly Empire Steel Corporation—to dismiss the amended complaint as to it and a statement of counsel supporting the complaint, filed June 25, 1948, by which said motion is not opposed.

It appears to the Commission that said respondent on December 19, 1948, sold all of its assets of any and every nature to the Studebaker Corporation and since said date has not owned any property capable of producing steel, has produced no steel, does not presently intend to produce steel at any time in the future, and has not been a member of the American Iron and Steel Institute since April 29, 1948.

IT IS ORDERED that the amended complaint herein be, and the same hereby is, dismissed as to respondent E. S. Liquidating Company—formerly Empire Steel Corporation.

By the Commission.

[SEAL] WM. P. GLENDENING, JR., *Acting Secretary.*

UNITED STATES OF AMERICA BEFORE FEDERAL TRADE COMMISSION

At a regular session of the Federal Trade Commission, held at its office in the city of Washington, D. C., on the 15th day of February A. D., 1949

Commissioners: Lowell B. Mason, Acting Chairman, Garland S. Ferguson, Ewin L. Davis, William A. Ayres.

Docket No. 5508

In the Matter of American Iron and Steel Institute et al.

ORDER DISMISSING AMENDED COMPLAINT AS TO RESPONDENT THE PHOENIX IRON CO.

This matter came on to be heard in regular course upon motion filed December 22, 1947, by counsel for respondent The Phoenix Iron Co. to dismiss the complaint as to it; a supplemental statement in support of said motion, filed January 22, 1948; and a statement of counsel supporting the complaint, filed January 23, 1948, together with supplemental statements by said counsel, filed October 12 and December 16, 1948, respectively, by which said motion is not now opposed.

It appears to the Commission that said respondent, on or about September 30, 1947, sold all its steel-producing facilities; that since said date it has ceased to engage in the production of steel and has existed solely as a holding company owning shares of stock in other corporations, none of which are engaged in the production of steel; that it does not presently intend to resume the production of steel; and that on or about October 9, 1947, it withdrew from membership in the American Iron and Steel Institute.

IT IS THEREFORE ORDERED that the amended complaint herein be, and the same hereby is, dismissed as to the respondent The Phoenix Iron Co.

By the Commission.

D. C. DANIEL, *Secretary.*

UNITED STATES OF AMERICA

BEFORE FEDERAL TRADE COMMISSION

Commissioners: James M. Mead, Chairman, William A. Ayres, Lowell B. Mason, John Carson, Stephen J. Spingarn.

Docket No. 5508

In the Matter of American Iron & Steel Institute, et al.

ORDER MODIFYING ORDER TO CEASE AND DESIST

This matter having come on to be heard by the Commission upon the joint motion of counsel supporting the complaint and counsel representing all the respondents, that the order to cease and desist issued herein on August 10, 1951, be modified by striking therefrom Inland Steel Products Company (name formerly Milcor Steel Company), a corporation, as a respondent against which said order was directed; and

The Commission having duly considered said motion and the record herein and it appearing that the evidence taken in this proceeding shows that Inland Steel Products Company (name formerly Milcor Steel Company) has not en-

gaged in the sale of the products involved in this proceeding and by virtue of that fact has not participated in the practices found and described in the findings as to the facts entered in this proceeding but through inadvertence said company was named as a party against which the order to cease and desist entered herein was directed:

IT IS ORDERED that the order to cease and desist heretofore entered in this proceeding be, and it hereby is, modified by striking therefrom Inland Steel Products Company (name formerly Milcor Steel Company), a corporation, as a respondent against which said order was directed.

IT IS FURTHER ORDERED that the complaint herein be, and it hereby is, dismissed as to Inland Steel Products Company (formerly Milcor Steel Company), a corporation.

By the Commission.

[SEAL] D. C. DANIEL, *Secretary.*

Issued: September 5, 1951.

DEPRECIATION AND HIGH COSTS

[Accounting Research Bulletin, December 1947, No. 33, issued by the Committee on Accounting Procedure, American Institute of Accountants, 13 East 41st Street, New York 17, N. Y.]

(Copyright 1947 by American Institute of Accountants)

The committee on accounting procedure recently authorized the issuance of a statement to members of the institute dealing with the propriety of charging to current income (*a*) amounts in excess of depreciation based on cost of plant facilities to provide for their replacement at higher prices, and (*b*) a portion of the cost of currently acquired new facilities representing part of all of the excess of current construction costs over an estimated reasonable cost. The committee now deems it appropriate to issue that statement as a research bulletin. The statement of the committee follows:

1. "The American Institute of Accounts committee on accounting procedure has given extensive consideration to the problem of making adequate provision for the replacement of plant facilities in view of recent sharp increases in the price level. The problem requires consideration of charges against current income for depreciation of facilities acquired at lower price levels."

2. "The committee recognizes that business management has the responsibility of providing for replacement of plant and machinery. It also recognizes that, in reporting profits today, the cost of material and labor is reflected in terms of inflated dollars while the cost of productive facilities in which capital was invested at a lower price level is reflected in terms of dollars whose purchasing power was much greater. There is no doubt that in considering depreciation in connection with product costs, prices, and business policies, management must take into consideration the probability that plant and machinery will have to be replaced at costs much greater than those of the facilities now in use."

3. "When there are gross discrepancies between the cost and current values of productive facilities, the committee believes that it is entirely proper for management to make annual appropriation of net income or surplus in contemplation of replacement of such facilities at higher price levels."

4. "It has been suggested in some quarters that the problem be met by increasing depreciation charges against current income. The committee does not believe that this is a satisfactory solution at this time. It believes that accounting and financial reporting for general use will best serve their purposes by adhering to the generally accepted concept of depreciation on cost, at least until the dollar is stabilized at some level. An attempt to recognize current prices in providing depreciation, to be consistent, would require the serious step of formally recording appraised current values for all properties, and continuous and consistent depreciation charges based on the new values. Without such formal steps, there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired."

5. "It would not increase the usefulness of reported corporate income figures if some companies charged depreciation on appraised values while others adhered to cost. The committee believes, therefore, that consideration of radical changes in accepted accounting procedure should not be undertaken, at least until a stable price level would make it practicable for business as a whole to make the change at the same time."

6. "The committee disapproves immediate write-downs of plant cost by charges against current income in amounts believed to represent excessive or abnormal costs occasioned by current price levels. However, the committee calls attention to the fact that plants expected to have less than normal useful life can properly be preciated on a systematic basis related to economic usefulness."

The statement entitled "Depreciation and High Costs" was adopted by the assenting votes of 20 members of the committee, of whom 1, Mr. Wellington, assented with qualification. Mr. Paton did not vote.

Mr. Wellington assents to the bulletin but does not approve the statement that changes in accounting and financial reporting should be postponed until the dollar is stabilized at some level. He believes that the depreciation of the dollar is already so great as to call for recognition thereof in the accounts expressed in dollars. In his opinion the price level is rarely believed to be stable, and waiting for stability may again and again be advanced as a reason for no recognition of changes that have already taken place.

CHAPTER 9—DEPRECIATION AND HIGH COSTS

[Accounting Research Bulletin, No. 43, issued by the Committee on Accounting Procedure, American Institute of Accountants, 13 East 41st Street, New York 17, N. Y.]

(Copyright 1953 by American Institute of Accountants)

1. In December 1947, the committee issued Accounting Research Bulletin No. 33, dealing with the subject of depreciation and high costs. In October 1948, it published a letter to the membership reaffirming the opinion expressed in the bulletin.

2. The subject is one of continuing importance. The committee once more expresses its approval of the basic conclusions asserted in both publications, but in view of the many requests received for further consideration of various aspects of the problem has placed the subject on its agenda for further study.

3. Accounting Research Bulletin No. 33 reads as follows:

* * * * * * *

10. The letter of October 14, 1949, was addressed to the members of the institute and reads as follows:

11. "The committee on accounting procedure has reached the conclusion that no basic change in the accounting treatment of depreciation of plant and equipment is practicable or desirable under present conditions to meet the problem created by the decline in the purchasing power of the dollar."

12. "The committee has given intensive study to this problem and has examined and discussed various suggestions which have been made to meet it. It has solicited and considered hundreds of opinions on this subject expressed by businessmen, bankers, economists, labor leaders, and others. While there are differences of opinion, the prevailing sentiment in these groups is against any basic change in present accounting procedures. The committee believes that such a change would confuse readers of financial statements and nullify many of the gains that have been made toward clearer presentation of corporate finances."

13. "Should inflation proceed so far that original dollar costs lose their practical significance, it might become necessary to restate all assets in terms of the depreciated currency, as has been done in some countries. But it does not seem to the committee that such action should be recommended now if financial statements are to have maximum usefulness to the greatest number of users."

14. The committee, therefore, reaffirms the opinion it expressed in Accounting Research Bulletin No. 33, December 1947."

15. "Any basic change in the accounting treatment of depreciation should await further study of the nature and concept of business income."

16. "The immediate problem can and should be met by financial management. The committee recognizes that the common forms of financial statements may permit misunderstanding as to the amount which a corporation has available for distribution in the form of dividends, higher wages, or lower prices for the company's products. When prices have risen appreciably since original investments in plant and facilities were made, a substantial proportion of net income as currently reported must be reinvested in the business in order to maintain assets at the same level of productivity at the end of a year as to the beginning."

17. "Stockholders, employees, and the general public should be informed that a business must be able to retain out of profits amounts sufficient to replace pro-

ductive facilities at current prices if it is to stay in business. The committee therefore gives its fully support to the use of supplementary financial schedules, explanations, or footnotes by which management may explain the need for retention of earnings."

Six members of the committee, Messrs. Andrews, Peloubet, Peoples, Smith, Wellington, and Williams, dissented to adoption of section (a), chapter 9.

BETHLEHEM STEEL CORP.,
New York, N. Y., October 11, 1957.

PAUL RAND DIXON,
Counsel, Antitrust and Monopoly Subcommittee, Committee on the Judiciary, United States Senate, Washington, D. C.

DEAR MR. DIXON: I received in due course your letters of September 18 and 25, 1957, respectively. I shall be present at the resumption by the subcommittee, in room 318 of the Senate Office Building, at 10 o'clock in the morning on Monday, October 21, 1957, of the hearings on administered prices.

I am enclosing, as schedule A, a list showing steelmaking facilities operated by Bethlehem, which were acquired by it since its organization in 1904, as requested in your letter of September 18, and, as schedule B, a list showing the information you requested regarding nonsteelmaking facilities operated by Bethlehem, which were similarly acquired.

I am enclosing, as schedule C, a tabulation showing facilities purchased from the United States Government between January 1, 1946, and July 31, 1957, and, as schedule D, a tabulation showing facilities on which accelerated amortization was obtained during that same period, as requested in your two letters and in Senator Kefauver's letter of August 16, 1957, to Mr. Grace, to the extent the information requested is available.

None of the facilities purchased from the United States Government and listed on the above-mentioned schedule C were steelmaking facilities and, because of the nature of the facilities, it is not feasible to attempt to make an estimate of the increase, if any, in capacity for production of steel products attributable to the acquisition of the several facilities. Likewise, the facilities referred to in such schedule D were in many cases of such nature as not to be directly related to an increase in capacity (for example, material handling and other nonproductive facilities). In the case of facilities susceptible of being related to an increase in capacity, the information set forth in schedule D is the estimated increase, per year, that was set forth in the applications for accelerated amortization. We do not now have, and in most cases could not ascertain without time-consuming studies, any information as to the increase in capacity that actually resulted from the installation of particular facilities. In the case of most of those facilities, the increase in capacity estimated as a result of the installation of a particular facility would be dependent not only on the installation of that facility itself, but upon the provision of additional facilities in respect of which accelerated amortization was not granted. The result, therefore, is that the amount stated in schedule D as the cost of a particular facility was, in most cases, less than the amount of the actual expenditure that was necessary in order to produce the estimated increase in capacity attributed in schedule D to such facility.

The amounts, in dollars, of the sales by Bethlehem in each of the years 1952 through 1956 of products purchased from other manufacturers and resold (not including raw materials and other products further processed before resale), which information was requested in your letter of September 18, are as follows:

1952	$56, 833, 523	1955	$73, 620, 456
1953	65, 492, 726	1956	80, 959, 307
1954	60, 370, 371		

I am enclosing, as schedule E, a list of the officer-directors of Bethlehem Steel Corp., with a description of their responsibilities in the corporation, and 2 copies of the affidavits that were filed on September 16, 1957, in the United States district court in connection with the proposed Bethlehem-Youngstown merger, all as likewise requested in your letter of September 18.

The information requested in your letter of September 25 is as follows (the paragraphs being numbered to correspond to the numbered paragraphs in that letter):

1. At the time of the issuance by the Federal Trade Commission of the complaint in Docket No. 5508, Bethlehem, generally speaking, quoted and sold its

rolled-steel products on the so-called delivered-price multiple-basing-point system of pricing, that is to say, on the basis of the mill base prices and the extras at the governing basing point plus railroad freight from there to the place of delivery. For example, if at that time in 1947 a customer desired to buy from us for delivery in Altoona, Pa., carbon bars produced at our plant in Johnstown, Pa., we would have quoted him a delivered price made up of the base price at the governing basing point (Pittsburgh, Pa.), plus applicable extras and the railroad freight from Pittsburgh to Altoona.

2. Bethlehem did not make any substantial changes in its method of pricing as a result of the consent decree of August 10, 1951. Prior thereto, in July 1948, Bethlehem had abandoned the above-mentioned system of pricing and had adopted the practice of offering to sell its rolled-steel products on the basis of f. o. b. mill or shipment point. It is still following that practice. For example, we would today quote to the customer referred to in paragraph 1 above a price f. o. b. our Johnstown plant, made up of our base price at that plant plus applicable extras, and the transportation charges from that plant to Altoona would be for his account.

If another customer wanted to buy carbon bars produced at our Johnstown plant for use in Camden, N. J., and he advised us that our price, computed as above, plus the transportation charges from Johnstown to Camden would result in a delivered price to him higher than would be the case if he bought from one of our competitors and that he would not buy from us at any higher price, we would, if we desired to obtain the business, quote him a price, for delivery at Camden, which would meet the competition of our competitor.

3. I assume that by "matched bids to the Government by various manufacturers of steel products" you mean to refer to situations where two or more producers of a steel product have offered to sell it to the Government at the same price for delivery to the same place. I am advised that such instances are of infrequent occurrence, but when they do occur, I would suppose it was because (*a*) each steel producer generally knows his competitors' f. o. b. mill price for a particular product, (*b*) transportation charges from producing mills to places of delivery to Government agencies are likewise generally known and (*c*) a producer who wishes to submit a bid to sell such a product to a Government agency can therefore generally estimate approximately what his competitors will bid. In the light of those facts, it would not be surprising if in some instances competitors' prices happened to be identical.

In the case of a proposed bid to the Government where we can estimate, as described above, that our f. o. b. mill price plus transportation charges would result in a delivered cost to the Government higher than would be the case if it bought elsewhere, we will, if we deem it desirable to obtain the business, quote on a delivered price basis which we estimate is not higher than could be obtained from a competitor.

Very truly yours,

A. B. HOMER, *President.*

SCHEDULE A.—*Steelmaking facilities operated by Bethlehem Steel Corp. and affiliated companies which were acquired by purchase*

[Capacities in net tons]

Properties acquired	Year acquired	Bethlehem capacity before acquisition	Capacity of facility	
			When acquired	In 1957
Bethlehem plant		0	212,800	3,750,000
Properties of the Pennsylvania Steel Co. (of Pennsylvania) at Steelton, Pa.	1916	1,108,800	793,000	1,500,000
Properties of Maryland Steel Company of Baltimore County, at Sparrows Point			672,000	6,200,000
Properties of Lackawanna Steel Co., at Lackawanna, N. Y.	1922	3,514,560	1,937,600	5,720,000
Properties of Cambria Steel Co., at Johnstown, Pa.	1923	5,747,840	2,159,360	2,330,000
Properties of Pacific Coast Steel Co.:				
At Seattle, Wash.	1930	9,217,600	156,800	246,000
At South San Francisco, Calif.			173,600	276,000
Properties of Southern California Iron & Steel Co., at Los Angeles, Calif.			95,200	478,000
Total			6,200,360	20,500,000

SCHEDULE B.—*Facilities for manufacture, fabrication and/or sale of steel products operated by Bethlehem which were acquired by purchase*

Name of company	Date acquired	Location	Major activity	Method of acquisition	Price	Sales in preceding years	
						Year	Amount
American Iron & Steel Manufacturing Co.	Jan. 1, 1917	Lebanon, Pa.	Manufacture of nuts, bolts, rivets.	Purchase of assets	$4,225,800	1915	$4,957,311.82
						1916	9,033,985.94
Lehigh Coke Co	Feb. —, 1917	Bethlehem, Pa.	Production of coke	do	8,067,250		
McClintic-Marshall Construction Co.	Feb. 10, 1931	Various	Fabrication and erection of structural steel.	do	38,617,246	1929	52,857,819.00
						1930	44,740,192.00
Levering & Garrigues Co	Apr. 21, 1931	Dunellen, N. J.	do	do	2,250,000	1929	4,187,407.00
						1930	8,107,107.00
Kalman Steel Co	Aug. 4, 1931	Ohio, Illinois, New Jersey, New York.	Fabricated and warehoused reinforcing bars.	do	830,065	1929	7,732,887.00
						1930	7,105,073.00
Seneca Iron & Steel Co	Oct. 28, 1932	Lackawanna, N. Y.	Manufacture of steel products; mining ore and coal.	do	1,078,814	1930	5,878,780.00
						1931	3,554,319.00
Taubman Supply Corp	Dec. 31, 1936	Oklahoma	Oil country supply	Purchase of stock	932,000	1935	2,311,806.00
						1936	4,121,488.00
Williamsport Wire Rope Co	Oct. 21, 1937	Williamsport, Pa.; Sparrows Point, Md.	Manufactured wire rope and strand.	Purchase of assets in receivership.	2,981,073	1935	1,923,768.00
						1936	2,759,809.00
International Supply Co	Dec. 30, 1938	Kansas, New Mexico, Oklahoma, and Texas.	Oil country supply	Purchase of stock	877,459		
American Well & Prospecting Co	June 30, 1944	Corsicana, Tex.	Manufactured oil well drilling equipment.	do	870,000		
Pacific Coast Forge Co	Nov. 30, 1944	Seattle, Wash.	Manufactured nuts, bolts, track spikes, etc.	do	690,000		
Buffalo Tank Corp	Jan 2, 1945 [1]	Dunellen, N. J.; Lackawanna, N. Y.	Manufactured steel containers	Purchase of stock over a 17-year period ending Jan. 2, 1945.	401,556	1943	2,142,970.00
						1944	1,937,781.00
Petroleum Equipment Co	Feb. 14, 1945	California	Sale of oil well supply	Purchase of stock	754,220	1943	10,112,290.00
						1944	9,662,830.00
Virginia Steel Co., Inc	June 15, 1956	Richmond, Va.; Miami, Fla.; Birmingham, Ala.	Fabricated reinforcing bars; sale of builder's supplies.	do	3,750,000	1944	8,708,053.00
						1955	10,872,995.00

[1] Date of last stock purchase.

SCHEDULE C.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Additions to gross property account represented by steel plant and related facilities purchased from U. S. Government, Jan. 1, 1946, to July 31, 1957, inclusive*

Facilities	Purchase price	Original cost to Government
Certain so-called scrambled facilities furnished by Bureau of Ordnance and installed at Bethlehem and Steelton plants	[1]	$18,965,325
6 electric overhead traveling cranes at the Bethlehem plant and machine tools at Bethlehem, Johnstown, and Lebanon plants and at Pottstown works	$346,240	694,417
5 spheroidizing furnaces at Bethlehem plant	9,238	[2]
Site work performed under suspended Defense Plant Corporation contracts for facilities at Sparrows Point plant	365,941	[2]
Property in West Taylor Township, Cambria County, Pa., consisting of land and building (including 7 cranes) which had been used by the U. S. Army as a shell-forging plant	500,000	[2]
Machine tools, Corsicana plant	161,458	383,914
Do	44,139	[2]

[1] The above-mentioned "scrambled" facilities, which had an estimated depreciated value at July 1, 1946, of $4,579,116, were acquired in return for $1,000,000, the undertaking by Bethlehem to maintain an average monthly capacity of 8,000 net tons of heavy forgings for 10 years from July 1, 1946, and to preserve the so-called East Lehigh division, Bethlehem plant, and the assumption by Bethlehem of various obligations relating to certain reconversion problems.
[2] Not available.

SCHEDULE D.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Facilities for manufacture and fabrication of steel products in respect of which accelerated amortization was allowed, Jan. 1, 1946, to July 31, 1957, inclusive*

BETHLEHEM STEEL CO. (PENNSYLVANIA)

TA-NC	Facility	Certified cost (after Dec. 31, 1949)	Percentage of certified cost subject to amortization	Product	Estimated increment (net tons)
	BETHLEHEM PLANT				
1116	Sintering machine and screening station	$652,609	70	Pig iron	240,000
	Additions and improvements to open hearth.	389,287	70	Open-hearth steel	188,000
	Foundry and related facilities	1,204,388	70		
1150	Additions to foundry	1,263,400	75	Ingot molds	72,000
	Office facilities	3,624,670	75		
7893	Battery of 80 coke ovens	11,060,949	85	Coke	480,000
	Additions to and enlargement of blast furnaces.	17,627,693	85	Pig iron	540,000
	Gas and steam supply and distribution systems.	9,396,980	85		
9433	Additions to and improvements of open-hearth furnaces.	767,672	55	Open-hearth steel	84,000
	Gas-recovery facilities	411,411	55		
	Machine tools	1,522,581	55		
	Plant utilities	62,237	55		
16943	Cinder cars	126,626	50		
	Machine tools	374,720	50		
24225	Combination structural bloom and billet mill, finishing, shipping, and related facilities.	[1] 28,910,000	50	Wide flange and standard structural shapes.	300,000
	Additions and improvements to soaking pits.	4,210,252	65		
25000	Additions to iron and brass foundries	375,475	65	Gray iron castings weighing over 3,000 pounds.	28,000
26106	Cranes and machine tools	958,871	50		
28892	Turbogenerator and related facilities	1,900,408	50		
31361	Additions to foundry facilities	2,319,000	65		
	STEELTON PLANT				
1114	Additions to and improvements of open-hearth facilities.	1,478,005	70	Open-hearth steel	172,000
	Rail-end hardening units	128,757	70	Railroad rails	130,000
	Machine tools	241,808	70	Fabricated plate structures.	2,600

[1] Facility project still incomplete. Cost is as estimated in necessity certificate application.

SCHEDULE D.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Facilities for manufacture and fabrication of steel products in respect of which accelerated amortization was allowed, Jan. 1, 1946, to July 31, 1957, inclusive*—Continued

BETHLEHEM STEEL CO. (PENNSYLVANIA)

TA-NC	Facility	Certified cost (after Dec. 31, 1949)	Percentage of certified cost subject to amortization	Product	Estimated increment (net tons)
1147	Open-hearth furnace	$2,261,876	75	Open-hearth steel	180,000
	Soaking pits and related facilities	634,936	75		
9434	Cinder and hot-metal cars	203,964	60		
	Crawler-type crane	59,353			
	Machine tools	540,651			
17781	Additions to ore yard and related facilities	1,508,592	60		
	Service and maintenance facilities	359,883	60		
25657	Soaking pits and related facilities	927,826	65		
25777	Turboblower	854,387	85	Pig iron	60,000
26079	Additions and improvements to coke-oven battery.	4,019,383	55	Coke	72,000
	LEBANON PLANT				
1118	Forging furnaces and related facilities	705,708	65	Bolts	1,400
				Nuts	600
				Rivets	3,900
	Machine tools	85,852	65	Couplings	1,000
	Furnace and related facilities	49,573	65	Studs and bolts	160
	Service facilities and utilities	296,686	65		
9435	Cold-rolling mill	158,112	50	Nuts	1,000
	A machine, straightener, and tappers	157,592	50	Cold-formed nuts	500
	Heat-treating furnace	119,056	50	Bolts	1,400
	Machine tools	210,989	50		
18007	Machines, straighteners, and tappers	431,608	65	Cold-formed nuts	2,200
				Boat and dock spikes.	300
				Studs	172
				Long bolts	2,800
				Cold-formed rivets.	5,400
	An electronic heater, machines, and related facilities.	575,816	65	Cold-formed bolts	4,900
				Threaded specialties.	2,900
				Long threaded products.	7,130
				Forged products	400
				Hot-forged nuts	2,500
	Utilities	99,171			
	SPARROWS POINT PLANT				
1115	Battery of coke ovens	6,421,983	65	Coke	564,000
	Hot-metal cars and salt-water pump	298,312	65		
	Additions to open-hearth facilities	2,146,878	65	Open hearth steel	600,000
	Cold mill and related facilities	25,671,558	65	Cold reduced sheets	672,000
				Galvanized sheets	96,000
	Additions and improvements to Bethanizing cells, nail machines, and related facilities.	272,911	65	Zinc-coated wire	8,800
				Bale wire	2,600
				Roofing nails	2,200
				Duplex-head nails	240
	Machine tools, utilities, and service facilities	374,274	65		
1148	Battery of coke ovens	8,283,076	80	Coke	396,000
	Screening and sintering plant	8,217,161	80	Pig iron	260,000
	Sulfur-removal station and extensions to gas mains.	866,183	80	Open-hearth steel	140,000
	Slab-heating furnace and related facilities	3,048,403	80	Hot-rolled strip	240,000
1156	Coke byproduct facilities	4,252,914	80	Sulfuric acid	[2] 250
4667	An electrolytic tin-plating unit	4,259,162	40	Electrolytic tinplate.	180,000
9436	Hot-metal cars and an E. O. T. crane	376,381	55		
	N. G. diesel electric locomotive	61,847	55		
	Oxygen-generating units and related facilities.	594,604	55		
	Palm-oil reclamation stations and related facilities.	637,314	55		
	Machine tools	344,808	55		
	Service facilities	522,084	55		
9649	A battery of coke ovens, coal chemical stations, and related facilities.	21,596,864	85	Coke	396,000
	Blast furnace	12,648,163	85	Pig iron	600,000
	Ore-dock extension and related handling facilities.	7,101,663	85		

[2] Per day.

SCHEDULE D.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Facilities for manufacture and fabrication of steel products in respect of which accelerated amortization was allowed, Jan. 1, 1946, to July 31, 1957, inclusive*—Continued

BETHLEHEM STEEL CO. (PENNSYLVANIA)

TA-NC	Facility	Certified cost (after Dec. 31, 1949)	Percentage of certified cost subject to amortization	Product	Estimated increment (net tons)
16217	A continuous scrubbing line, a trimming and shearing line, and utilities.	$1,775,183	40	Tinplate	120,000
16915	Additions and improvements to coke-oven batteries.	5,838,515	45	Coke	24,000
16942	Nail machines and a steel pickling tank	255,000	60	Nails	8,400
	Laboratory facilities, machine tools, and coke-oven gas main.	763,000	60		
18431	A steam-generating boiler and related facilities.	6,171,915	70		
18564	Additions and improvements to open-hearth furnaces and related facilities.	5,871,435	65		
	Modifications to blooming mill and related facilities.	3,813,953	65		
25722	Utilities and service facilities	4,697,286	50		
25902	Additions and improvements to soaking pits and related facilities.	1,333,828	65		
	Horizontal mill stands and related facilities	996,951	65		
25987	A sintering line and related facilities	3,413,486	50		
26126	An electrolytic tin-plating unit	[1] 11,000,000	40	Electrolytic tinplate.	216,000
28432	Normalizing furnace	[1] 480,000	50	Normalized steel plates.	6,000
	Flash welder with trimmer, locomotive, crane, and waterline.	[1] 1,470,000	50		
29039	Electrolytic tin-plating units	[1] 22,000,000	30	Electrolytic tinplate.	240,000
2941	Plate mill	[1] 30,100,000	50	Sheared steel plates.	300,000
	LACKAWANNA PLANT				
1103	Screening plant	4,480,841	70	Pig iron	240,000
	Additions and improvements to open-hearth facilities.	941,885	70	Open-hearth steel	360,000
	A blooming and slabbing mill stand	367,786	70		
	Additions and improvements to hot-strip mill.	12,089,954	70	Hot-rolled bands Sheets	480,000 420,000
	Improvements to bar mill	866,416	70	Bars	115,000
	Machine tools and maintenance facilities	539,335	70		
1145	Battery of coke ovens	9,182,534	85	Coke	420,000
	Blast furnace	15,426,780	85	Pig iron	600,000
	Gas-distribution facilities	4,838,805	85		
	Open-hearth furnaces	12,183,893	85	Open-hearth steel	720,000
	Soaking pits and related facilities	4,172,910	85		
	Service and power facilities	6,906,926	85		
1146	Reconstructing adjoining sections of ship canal.	6,012,588	80		
9437	Production, maintenance, and service facilities.	1,722,277	55		
18231	Billet-reheating furnace, machine tools, maintenance and repair facilities.	2,003,190	60		
25234	Additions and improvements to 30- and 21-inch rolling mills and related facilities.	2,021,509	65		
25610	Turboblower	735,102	85	Pig iron	43,000
25698	Additions and improvements to No. 1 pickler line and related facilities, an air compressor, and inert gas generator, and utilities.	5,810,219	50		
26080	A coal-stocking system, a coal-reclaiming system, and utilities.	1,224,264	25		
27348	Ingot-mold hot-top preparation and handling equipment.	1,128,208	65		
	A carpenter and pattern shop	548,865	50		
28891	Locomotives, locomotive crane, a coal spillage elevator, and steam main.	430,638	50		

[1] Facility project still incomplete. Cost is estimated in necessity certificate application.

SCHEDULE D.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Facilities for manufacture and fabrication of steel products in respect of which accelerated amortization was allowed, Jan. 1, 1946, to July 31, 1957, inclusive*—Continued

BETHLEHEM STEEL CO. (PENNSYLVANIA)

TA-NC	Facility	Certified cost (after Dec. 31, 1949)	Percentage of certified cost subject to amortization	Product	Estimated increment (net tons)
	PLANT—JOHNSTOWN				
1117	2 batteries of coke ovens	$5,991,574	70	Coke	432,000
	2 turboblowers	2,855,994	70	Pig iron	84,000
	Locomotives, cranes, charging machines, cinder cars, and hot-metal cars.	5,486,091	70	Open-hearth steel	180,000
	Slabbing-blooming mill and related facilities.	14,928,187	70		
	4-stand 30-inch continuous roughing billet mill and related facilities.	4,902,736	70		
	Turbogenerator and related facilities	2,630,446	70		
	Annealing furnaces and related facilities, nail machines, and coke-oven gasline.	684,443	70		
	An axle cutoff and centering machine and related facilities and a steam line.	664,133	70		
	Machine tools and maintenance facilities	379,271	70		
9438	Desulfurization of coke-oven gas, machine tools, nail machines, and service facilities.	2,655,164	60		
16941	An ore bridge and related facilities, a precipitator, machine tools, and power facilities.	2,648,842	75		
23217	A heating furnace, a rotary furnace and related facilities, and a power-transmission system.	1,187,583	50	Welded freight cars.	600
25901	3-high plate-mill stand	1,268,002	50	Plates	48,000
26161	Soaking pits and related facilities	955,748	65		
26162	Turboblower	1,380,535	85	Pig iron	35,000
26266	Production, service, and maintenance facilities.	580,015	50		
28099	A waterline and related facilities	295,070	50		
28623	Power, steam, and related facilities	1,062,007	50		
29829	A plate-mill shipping building and related facilities.	889,197	50		
	WILLIAMSPORT PLANT				
6256	Winding, stranding, and closing machines, machine tools, and materials-handling equipment.	344,742	60	Wire rope with wire-rope centers. Wire-rope slings	4,000 1,800
	RANKIN WORKS				
9440	Service and materials-handling equipment	151,336	50	Fabricated steel	10,000
	LEETSDALE WORKS				
9439	Additions to galvanizing building and to templet and repair shop and related facilities.	258,436	50	Galvanized steel for transmission towers.	18,000
	POTTSTOWN WORKS				
1123	Heating facilities and a machine tool	59,415	60		
11275	Machine tools and materials-handling facilities.	71,070	50		

SCHEDULE D.—*Bethlehem Steel Corp. and its subsidiaries, consolidated—Facilities for manufacture and fabrication of steel products in respect of which accelerated amortization was allowed, Jan. 1, 1946, to July 31, 1957, inclusive*—Continued

BETHLEHEM PACIFIC COAST STEEL CORP.

TA-NC	Facility	Certified cost (after Dec. 31, 1949)	Percentage of certified cost subject to amortization	Product	Estimated increment (net tons)
	LOS ANGELES PLANT				
1119	An electric melting furnace and related facilities.	$828,217	65	Open-hearth steel.	144,000
	Additions to 22-inch billet mill	192,947	65		
	A continuous billet-heating furnace and related facilities.	1,827,488	65	Bars	72,000
	Nut- and bolt-making equipment	292,986	65		
1149	Electric melting furnace and related facilities.	2,847,776	75	Open-hearth steel.	60,000
9442	An E. O. T. crane	105,393	50		
	Annealing furnaces and wire-drawing machines.	280,669	50	Wire	6,000
	Machine tools and testing equipment	149,332	50		
18375	Railroad track and track scale, and machine tools.	206,825	40		
27073	Soaking-pit furnaces and related facilities	[1] 1,200,000	65		
	Production and service facilities	[1] 2,626,000	50		
27984	Wire patenting and hot dip galvanizing facilities.	986,492	50		
	SEATTLE PLANT				
1121	An extension to open-hearth building and related facilities.	75,775	55		
1121	Improvements to 22-inch mill	41,213	55		
	Machine tools	16,820	55		
9444	An open-hearth charging machine and machine tools.	137,109	60		
18671	N. G. diesel electric locomotive	23,088	60		
	Machine tools	76,129	60		
	A water-cooling tower	52,763	60		
	SOUTH SAN FRANCISCO PLANT				
1120	2 ladle cranes	187,362	65	Open-hearth steel.	15,000
	A structural-steel transmission tower testing frame and related facilities.	145,894	65	Transmission towers.	6,000
	A threading machine	9,860	65	Special threaded products.	180
9443	Improvements to open-hearth pit building and related facilities.	184,869	65	Open-hearth steel.	6,000
18670	Machine tools	252,464	50		
26807	Power facilities, threading machines, and a water-cooling tower.	302,120	50		
	SEATTLE FABRICATING WORKS				
1125	Buildings and related facilities, cranes, power facilities, and machine tools.	1,415,188	60		
	A 20-ton mobile truck crane	25,692	60		

BETHLEHEM STEEL CO. (DELAWARE)

	EASTERN ERECTION				
1124	Derrick travelers and a machine tool	$65,746	60		
	CLEARING, ILL., WAREHOUSE				
5907	Mill depot and fabricating building and related facilities.	152,333	50		

[1] Facility project still incomplete. Cost is as estimated in necessity certificate application.

SCHEDULE E.—*Officer-directors of Bethlehem Steel Corp.*

Name	Position	Responsibility
E. G. Grace	Director and chairman.	General and active supervision and direction over the business and affairs of the corporation and its several officers, subject to the control of the board of directors.
A. B. Homer	Director and president.	General and active supervision over the business of the corporation and its several officers, subject to the direction of the chairman and to the control of the board of directors; at the request of, or in the absence or inability to act of, the chairman, has the powers and performs the duties of the latter.
R. E. McMath	Director, vice president, and chairman of finance committee.	Finance committee is responsible for the general supervision of activities, plans, and policies affecting financial and related matters, including financing, budgets, insurance, legal matters, real estate, claims, secretarial matters and investments, credit and other treasury matters.
D. T. Aikenhead	Director, treasurer and assistant secretary.	Treasury and stock transfer matters in New York, N. Y., subject to the supervision of the finance committee.
F. R. Brugler	Director and comptroller.	Accounting matters.
B. D. Broeker	Director and secretary.	Secretarial and legal matters, subject to the supervision of the finance committee.
J. P. Bender	Director and assistant treasurer.	Treasury matters in Bethlehem, Pa., subject to the supervision of the finance committee.
W. H. Johnstone	Director and assistant secretary.	Real estate, claims, insurance, and related matters, subject to the supervision of the finance committee.

18 highest paid men in United States industry

1. Eugene G. Grace, chairman, Bethlehem $809,011
2. Harlow H. Curtice, president, General Motors 695,100
3. Arthur B. Homer, president, Bethlehem 669,176
4. Crawford H. Greenewalt, president, Du Pont 600,886
5. Frederic G. Donner, executive vice president, General Motors 577,625
6. Stewart J. Cort, vice president, Bethlehem 529,340
7. Louis C. Goad, executive vice president, General Motors 521,000
8. Robert E. McMath, vice president, secretary, Bethlehem 514,340
9. Norborne Berkeley, vice president, Bethlehem 499,340
10. Joseph M. Larkin, vice president, Bethlehem 499,340
11. Daniel D. Strohmeier, vice president, Bethlehem 444,424
12. Arthur F. Peterson, vice president, Bethlehem 434,424
13. J. W. Schwab, president, United Merchant & Manufacturers 386,588
14. Harry C. Crawford, vice president, Bethlehem 374,507
15. Paul S. Killian, vice president, Bethlehem 374,507
16. Ernest R. Breech, chairman, Ford Motor 370,000
17. Henry Ford II, president, Ford Motor 370,000
18. Jesse V. Honeycutt, vice president, Bethlehem 364,589

Source: American Institute of Management, Corporate Director, August 1957, p. 4.

Changes in base prices of carbon steel products, August 1956–July 1957, 10 leading companies

HOT-ROLLED BARS—MERCHANT QUALITY

	August 1956 revisions				July 1957 revisions		
	Base price Aug. 6, 1956	Revisions		New base price	Revisions		New base price
		Dollars	Percent		Dollars	Percent	
United States Steel	$93.00	$8.50	9.14	$101.50	$7.00	6.90	$108.50
Bethlehem	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Republic	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Jones & Laughlin	93.00	8.60	9.25	101.60	7.00	6.89	108.60
National (G. L.)	95.00	8.50	8.94	103.50	7.00	6.76	110.50
Youngstown	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Armco	98.00	8.50	8.67	106.50	7.00	6.57	113.50
Inland	93.00	8.60	9.24	101.60	7.00	6.89	108.60
Colorado Fuel & Iron	102.00	8.50	8.33	110.50	7.00	6.33	117.50
Wheeling							

COLD-FINISHED BARS

United States Steel	$125.00	$12.00	9.60	$137.00	$9.00	6.57	$146.00
Bethlehem							
Republic	125.00	12.00	9.60	137.00	9.00	6.57	146.00
Jones & Laughlin	125.00	12.00	9.60	137.00	9.00	6.57	146.00
National							
Youngstown	125.00	12.00	9.60	137.00	9.00	6.57	146.00
Armco							
Inland							
Colorado Fuel & Iron							
Wheeling							

CONCRETE REINFORCEMENT BARS

United States Steel	$93.00	$8.50	9.14	$101.50	$7.00	6.90	$108.50
Bethlehem	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Republic	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Jones & Laughlin							
National (G. L.)	95.00	13.50	14.21	108.50	7.00	6.45	115.50
Youngstown	93.00	8.50	9.14	101.50	7.00	6.90	108.50
Armco	98.00	8.50	8.67	106.50	7.00	6.57	113.50
Inland	93.00	8.60	9.24	101.60	7.00	6.89	108.60
Colorado Fuel & Iron	102.00	8.50	8.33	110.50	7.00	6.33	117.50
Wheeling							

SHEET PILING

United States Steel	$109.00	$9.00	8.26	$118.00	$6.50	5.51	$124.50
Bethlehem	109.00	9.00	8.26	118.00	6.50	5.51	124.50
Republic							
Jones & Laughlin							
National							
Youngstown							
Armco							
Inland							
Colorado Fuel & Iron							
Wheeling	90.00	7.00	7.78	97.00			

HOT-ROLLED STRIP

United States Steel	$86.50	$7.00	8.09	$93.50	$5.00	5.35	$98.50
Bethlehem	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Republic	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Jones & Laughlin	86.60	7.00	8.08	93.60	5.00	5.34	98.60
National (W)	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Youngstown	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Armco:							
Ashland	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Kansas City	91.50	7.00	7.65	98.50	4.00	4.06	102.50
Inland	86.60	7.00	8.08	93.60	5.00	5.34	98.60
Colorado Fuel & Iron	108.50	7.00	6.45	115.50	5.00	4.33	120.50
Wheeling							

Changes in base prices of carbon steel products, August 1956–July 1957, 10 leading companies—Continued

HOT-ROLLED SHEETS (18 GAUGE AND HEAVIER)

	August 1956 revisions				July 1957 revisions		
	Base price Aug. 6, 1956	Revisions		New base price	Revisions		New base price
		Dollars	Percent		Dollars	Percent	
United States Steel	$86.50	$7.00	8.09	$93.50	$5.00	5.35	$98.50
Bethlehem	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Republic	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Jones & Laughlin	86.60	7.00	8.08	93.60	5.00	5.34	98.60
National (W)	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Youngstown	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Armco	86.50	7.00	8.09	93.50	5.00	5.35	98.50
Inland	86.60	7.00	8.08	93.60	5.00	5.34	98.60
Colorado Fuel & Iron							
Wheeling	86.50	7.00	8.09	93.50	5.00	5.35	98.50

GALVANIZED SHEETS, FLAT OR FORMED

United States Steel	$117.00	$9.00	7.69	$126.00	$6.00	4.76	$132.00
Bethlehem	117.00	9.00	7.69	126.00	6.00	4.76	132.00
Republic	117.00	9.00	7.69	126.00	6.00	4.76	132.00
Jones & Laughlin	117.00	9.00	7.69	126.00	6.00	4.76	132.00
National (W)	117.00	9.00	7.69	126.00	6.00	4.76	132.00
Youngstown							
Armco	117.00	9.00	7.69	126.00	6.00	4.76	132.00
Inland	117.00	9.00	7.69	126.00	6.00	4.76	132.00
Colorado Fuel & Iron							
Wheeling	117.00	9.00	7.69	126.00	6.00	4.76	132.00

COLD-ROLLED SHEETS

United States Steel	$106.50	$8.50	7.98	$115.00	$6.00	5.22	$121.00
Bethlehem	106.50	8.50	7.98	115.00	6.00	5.22	121.00
Republic	106.50	8.50	7.98	115.00	6.00	5.22	121.00
Jones & Laughlin	106.60	8.40	7.88	115.00	6.00	5.22	121.00
National (W)	106.50	8.50	7.98	115.00	6.00	5.22	121.00
Youngstown	106.50	8.50	7.98	115.00	6.00	5.22	121.00
Armco	106.50	8.50	7.98	115.00	6.00	5.22	121.00
Inland	106.60	8.40	7.88	115.00	6.00	5.22	121.00
Colorado Fuel & Iron							
Wheeling	106.50	8.50	7.98	115.00	6.00	5.22	121.00

WIRE RODS

United States Steel	$107.50	$8.50	7.91	$116.00	$7.00	6.03	$123.00
Bethlehem:							
Johnstown	107.50	8.50	7.91	116.00	7.00	6.03	123.00
Sparrows Point	109.50	8.50	7.76	118.00	7.00	5.93	125.00
Republic	107.50	8.50	7.91	116.00	7.00	6.03	123.00
Jones & Laughlin	107.60	8.40	7.81	116.00	7.00	6.03	123.00
National							
Youngstown	107.50	8.50	7.91	116.00	7.00	6.03	123.00
Armco	112.50	8.50	7.56	121.00	7.00	5.79	128.00
Inland							
Colorado Fuel & Iron:							
Buffalo	107.50	8.50	7.91	116.00	7.00	6.03	123.00
Colorado	112.50	8.50	7.56	121.00	7.00	5.79	128.00
Trenton	109.50	8.50	7.76	118.00	7.00	5.93	125.00
Wheeling							

STRUCTURAL SHAPES

	August 1956 revisions				Interim revisions				July 1957 revisions		
	Base price, Aug. 6, 1956	Revisions		New base price	Effective date	Revisions		New base price	Revisions		New base price
			Percent				*Percent*			*Percent*	
United States Steel	$92.00	$8	8.70	$100.00					$5.50	5.50	$105.50
Bethlehem	93.00	8	8.60	101.00					5.50	5.45	106.50
Republic											
Jones & Laughlin	92.00	8	8.70	100.00					5.60	5.60	105.60
National (W)	92.00	8	8.70	100.00					5.50	5.50	105.50
Youngstown	92.00	8	8.70	100.00					5.50	5.50	105.50
Armco	94.00	8	8.51	102.00					5.50	5.39	107.50
Inland	92.00	8	8.70	100.00		$5.00	5.00	$105.00	.60	.57	105.60
Colorado Fuel & Iron	98.00	8	8.16	106.00					5.50	5.19	111.50
Wheeling											

PLATES

United States Steel	$90.00	$7	7.78	$97.00					$5.00	5.15	$102.00
Bethlehem	90.00	7	7.78	97.00					5.00	5.15	102.00
Republic	90.00	7	7.78	97.00					5.00	5.15	102.00
Jones & Laughlin	92.00	5	5.43	97.00					5.00	5.15	102.00
National											
Youngstown	90.00	7	7.78	97.00					5.00	5.15	102.00
Armco:											
Ashland	90.00	7	7.78	97.00					5.00	5.15	102.00
Houston	92.00	7	7.61	99.00					5.00	5.05	104.00
Inland	90.00	7	7.78	97.00					5.00	5.15	102.00
Colorado Fuel & Iron:											
Minnequa	107.00	7	6.54	114.00					5.00	4.39	119.00
Claymont	107.00			107.00		$7.00	6.54	$114.00			114.00
Wheeling	90.00	7	7.78	97.00					5.00	5.15	102.00

RAILS—NO. 1

United States Steel	$94.50	$7	7.41	$101.50	Mar. 1, 1957	$4.00	3.94	$105.50	$5.00	4.74	$110.50
Bethlehem	94.50	7	7.41	101.50		4.00	3.94	105.50	5.00	4.74	110.50
Republic											
Jones & Laughlin											
National											
Youngstown											
Armco											
Inland	94.60	7	7.40	101.60		4.00	3.94	105.60	5.00	4.73	110.60
Colorado Fuel & Iron	94.50	7	7.41	101.50		4.00	3.94	105.50	5.00	4.74	110.50
Wheeling											

COLD-ROLLED STRIP

United States Steel	$125.00	$12	9.60	$137.00					$6.00	4.37	$143.00
Bethlehem											
Republic	125.00	12	9.60	137.00					6.00	4.37	143.00
Jones & Laughlin	125.00	12	9.60	137.00					6.00	4.37	143.00
National	125.00	12	9.60	137.00					6.00	4.37	143.00
Youngstown	125.00	12	9.60	137.00					6.00	4.37	143.00
Armco	125.00	12	9.60	137.00					6.00	4.37	143.00
Inland											
Colorado Fuel & Iron	138.00	12	8.70	150.00		−$4.00	−2.67	$146.00	6.00	4.11	152.00
Wheeling											

WIRE—ANNEALED MERCHANT QUALITY

United States Steel	$150.00	$12	8.00	$162.00	Oct. 3, 1956	−$3.00	−1.85	$159.00	$9.00	5.66	$173.00
					Mar. 2, 1957	5.00	3.14	164.00			
Bethlehem:											
Johnstown	150.00	12	8.00	162.00		2.00	1.23	164.00	9.00	5.66	173.00
Sparrows Point	152.00	12	7.89	164.00		2.00	1.22	166.00	9.00	5.42	175.00
Republic	150.00	12	8.00	162.00		2.00	1.23	164.00	9.00	5.66	173.00
Jones & Laughlin	150.00	12	8.00	162.00		2.00	1.23	164.00	9.00	5.66	173.00
National											
Youngstown	150.00	12	8.00	162.00		2.00	1.23	164.00	9.00	5.66	173.00
Armco	155.00	12	7.74	167.00		2.00	1.20	169.00	9.00	5.33	178.00
Inland											
Colorado Fuel & Iron:											
Buffalo	150.00	12	8.00	162.00		2.00	1.23	164.00	9.00	5.66	173.00
Colorado	155.00	12	7.74	167.00		2.00	1.20	169.00	9.00	5.33	178.00
San Francisco	169.00	12	7.10	181.00		2.00	1.10	183.00	9.00	4.92	192.00
Massachusetts	156.00	12	7.69	168.00		2.00	1.19	170.00	9.00	5.29	179.00
Wheeling											

WIRE—GALVANIZED MERCHANT QUALITY

	August 1956 revisions				Interim revisions				July 1957 revisions		
	Base price, Aug. 6, 1956	Revisions		New base price	Effective date	Revisions		New base price	Revisions		New base price
			Percent				Percent			Percent	
United States Steel	$158.00	$12	7.59	$170.00	{Oct. 3, 1956 {Mar. 2, 1957	−$3 8	−1.76 4.79	$167.00 175.00	$9.00	5.39	$184.00
Bethlehem:											
Johnstown	162.00	12	7.41	174.00		5	2.87	179.00	7.50	4.19	186.50
Sparrows Point	164.00	12	7.32	176.00		5	2.84	181.00	7.50	4.14	188.50
Republic	158.00	12	7.59	170.00		5	2.94	175.00	9.00	5.39	184.00
Jones & Laughlin	160.60	12	7.47	172.60		5	2.90	177.60	9.00	5.07	186.60
National	160.00	12	7.50	172.00		5	2.91	177.00	9.00	5.08	186.00
Youngstown	163.00	12	7.36	175.00		5	2.86	180.00	9.00	5.00	189.00
Armco											
Inland											
Colorado Fuel & Iron:											
Buffalo	158.00	12	7.59	170.00		5	2.94	175.00	9.00	5.39	184.00
Colorado	163.00	12	7.36	175.00		5	2.86	180.00	9.00	5.00	189.00
San Francisco	177.00	12	6.78	189.00		5	2.65	194.00	9.00	4.64	203.00
Massachusetts	164.00	12	7.32	176.00		5	2.84	181.00	9.00	4.97	190.00
Wheeling											

BETHLEHEM STEEL CORP.,
New York, N. Y., August 1, 1957.

Hon. ESTES KEFAUVER,
Chairman, Antitrust and Monopoly Subcommittee,
Committee on the Judiciary,
United States Senate, Washington, D. C.

DEAR SENATOR KEFAUVER: I have your letter of July 25, 1957, in which you ask that I submit to the Senate Subcommittee on Antitrust and Monopoly, to assist it in the hearings which it plans to hold in the near future on the recent price increases in the steel industry, the types of information described in the attachment to your letter.

Your letter was addressed to me as president of Bethlehem Steel Corp. and I am answering it in that capacity. As you may know, however, that corporation does not itself produce or sell any iron or steel products, and you will therefore understand that the information I am furnishing herein relates to the group consisting of the corporation and its subsidiaries.

In furnishing this information I desire to emphasize that our direct employment costs, to which your questions appear to be primarily related, are only one element of the many direct and indirect costs which must be considered in the determination of our total cost of producing steel products. As shown below, the direct employment costs were about 40 percent of our total costs in 1956. The same conditions which cause increases in our own direct employment costs necessarily contribute, as I am sure you understand, to increases in other elements of our costs, including purchased materials, supplies, and services.

The information which you have requested is as follows (the paragraphs being numbered to correspond to the numbered paragraphs in the above-mentioned attachment to your letter):

1. Bethlehem's increase in employment costs for employees covered by the labor agreement made in August 1956, with the United Steel Workers of America is 24 cents per man-hour in 1957, including a cost-of-living adjustment in the amount of 3½ cents per man-hour which became effective, pursuant to said agreement, with the first pay period beginning after January 1, 1957.

2. In the year 1956 the number of man-hours worked by Bethlehem employees per net ton of finished steel products shipped by Bethlehem was 18.9.

3. Bethlehem's steel operating rates, expressed in terms of percentage of rated steel capacity by quarters since January 1, 1953, are set forth on schedule A enclosed herewith.

4. The several elements of cost reflected in Bethlehem's consolidated income statement for the year 1956, expressed in terms of percentages of total costs, are as follows:

	Percent
Employment costs	39.4
Materials, supplies, freight, and other services	47.1
Depreciation, depletion, and amortization	4.7
Interest and other charges	0.5
Taxes (other than social security taxes)	8.3

5. Although the information relating to future market conditions which Bethlehem had on July 1, 1957, was not set forth in any written market studies or analyses prepared in connection with its decision to increase the prices of some of its products, Bethlehem's expectation was that its steel operating rate would be approximately as follows during the balance of the year:

	Percent
3d quarter	90
4th quarter	98

6. I understand from your telegram to me dated July 30, 1957, that you do not desire to have Bethlehem answer question 6.

7. Enclosed herewith as schedules B–1 and B–2 are lists showing the mill base prices of Bethlehem, in cents per pound (in certain cases, converted from the basis on which such products are customarily quoted and sold), immediately before and after certain price increases which Bethlehem made in August 1956, and July 1957, respectively, for those of the products listed in paragraph 7 of the attachment to your letter which Bethlehem produces.

Very truly yours,

A. B. HOMER, *President.*

[The Wall Street Journal, October 18, 1957]

Pittsburgh Steel Scrap Prices Fall $4 a Ton to Lowest Level in 2 Years

Markets in other areas also declining; drop attributed to sluggish steel output

Steel-scrap prices declined again in Pittsburgh with quotations falling as much as $4 a ton to their lowest levels in over 2 years.

In other steelmaking areas across the country scrap markets also were either declining or dealers were looking for further price cuts in the days or weeks ahead.

The weakness in prices was ascribed by both sellers and consumers of the steelmaking material to continued sluggishness of steel production—failure of an expected fourth quarter revival to materialize. Since midyear, steel output nationally has been running within a few percentage points of 80 percent of rated capacity, and scrap supplies have been piling up.

In Pittsburgh, no recent buying was reported in No. 1 heavy melting scrap, the key steelmaking grade. But on the basis of a mill's purchases of a secondary grade, the quotation for No. 1 heavy melting was indicated at around $39 a ton, a drop of $4 from previous estimates.

The Pittsburgh area mill bought No. 2 bundled scrap, paying $30 a ton for local material on up to $33 a ton for scrap brought from outside points. Those levels are between $1 and $4 a ton below recent quotations.

A $39 price for No. 1 heavy melting is generally in line with what trade periodicals have been estimating the past few days and is the lowest price for that grade since summer, 1955.

Activity has also been limited in Pittsburgh in No. 2 heavy melting scrap, but dealers, brokers, and mills agree that grade could be bought for about $35 a ton, down $2.

Pittsburgh dealers see nothing in the immediate outlook that indicates a reversal in the price decline that in 2 months has slashed the price of No. 1 heavy melting by $1 a ton.

As recently as mid-August, it was quoted at $57 a ton in Pittsburgh and early in the year hit a record high of $67.

In Philadelphia, dealers said they are quoting prices about $1 a ton below those of early last week. For one secondary grade, No. 2 bundles, a dealer reported a drop of as much as $2.

The latest Philadelphia sale of No. 1 heavy melting was at $37.50 a ton, off $1. Other quotations: No. 2 heavy melting at $33.50 to $34.50, and No. 2 bundles at $27.50 to $28.50.

In New York, a dealer credited export demand for propping the market to some extent. No. 1 heavy melting scrap is quoted at $37 to $38 a ton, off about $1 from recent prices.

The Chicago market was described as listless and weak. With hardly any mill buying in more than a month, quotations are the prices that brokers offer dealers. They're tendering $32 to $33 a ton for No. 1 heavy melting, $29 to $30 for No. 2 heavy melting and $20 for No. 2 bundles.

Industrial scrap, produced in plants in fabricating steel products, was reported to be faring no better in Chicago than dealer metal. Usually, when mills are turning down dealer scrap they continue to accept industry-generated material. Not only is this desirable, premium metal, but also mills make a practice of taking scrap from plants which bought new steel from them. Currently, however, mills are reported to be turning down this industrial material.

Scrap dealers in Cleveland reported no actual sales the past few days, but indicated the market is weak.

Said a leading dealer: "There seem to be very few potential sales in the offing, and it seems likely that any sales made will be at lower prices." He noted heavy dealer supplies of the metal, which he figured would increase as further supplies come in next month.

This dealer added that it's possible the decline in prices could flatten out when the next sales are made, "but at the moment it looks like further weakness" in the market.

The west coast scrap market presented a somewhat conflicting picture, although it was agreed that it was weak.

In San Francisco, a dealer reported the current market is quiet, but he predicted, "We will have another drop in the price in November. How much, I can't tell right now." Pacific coast scrap prices fell $5 a ton across the board on October 1, with No. 1 heavy melting dropping to $39 a ton from $44.

The sharp price cuts were said to stem from moves by dealers to clear out their yards to make room for more scrap that is flowing in.

In Birmingham, Ala., a dealer reported mill buying has been very light for 2 weeks and added: "We look for a price drop within the next few days. The market looks very weak." Birmingham prices dropped $5 to $6 a ton the first of the month.

Estimated reduction in cost of making steel by Bethlehem resulting from fall in price of scrap

Year	Production of finished steel products (1,000 tons) (Bethlehem) (1)	Purchased scrap consumed (1,000 tons) (Bethlehem) (2)	Average price paid for purchased scrap (per ton) United States Steel (3)	Computed cost of purchased scrap consumed (thousands) (4)	Cost of purchased scrap consumed for ton of finished steel, (per ton) (5)
1952	10,291	2,878			
1953	12,713	3,546			
1954	10,227	2,085	$26.59	$55,440	$5.71
1955	13,554	3,221	31.67	102,009	7.53
1956	13,199	3,658	45.31	165,744	12.56
1957 (September)	1,139	291	34.00	9,894	8.69

DATA AND ASSUMPTIONS

1. Production of finished steel products, Bethlehem, 1952–56, as reported in Moody's Industrial Manual, 1957, p. 2458. 1957 from Bethlehem.
2. Purchased scrap consumed:
   1952–56 from Bethlehem by letter.
   1957, estimated from average ratio of purchased scrap consumed to production of finished steel products.
   1952–56 (25.54 percent).
3. Average price paid for purchased scrap:
   1954–56.—United States Steel data, as reported to the subcommittee by letter. It is assumed that Bethlehem and United States Steel will pay approximately the same prices for purchased scrap.
   1957 current.—Derived from 25 percent drop in American Metal Market's Composite Price for No. 1 heavy melting scrap from 1956 average to October 1957; this percentage reduction applied to average buying price for 1956 for United States Steel.
4. Computed cost of purchased scrap consumed: data in col. (2) multiplied by data in col. (3).
5. Cost of purchased scrap consumed per ton of finished steel: col. (4) divided by col. (1).

Proxies in this form are solicited on behalf of the Management of the Corporation.

BETHLEHEM STEEL CORPORATION
Proxy for Special Meeting, September 17, 1957

The undersigned hereby appoints Arthur B. Homer, Robert E. McMath and Norborne Berkeley the proxies, and each of them (with power to act without the others and with power of substitution) the proxy, of the undersigned, for and in the name of the undersigned, to vote at the Special Meeting of the Stockholders of Bethlehem Steel Corporation noticed to be held at its principal office, at No. 100 West Tenth Street, Wilmington, Delaware, on September 17, 1957, at 12 o'clock Noon, Eastern Daylight Saving Time, or at any adjournment thereof, the shares of stock that the undersigned would be entitled to vote, if then personally present, with respect to the following proposals, to wit: (a) the approval of a proposed stock option plan of said Corporation and the adoption of a proposed related amendment of Article Fourth of its Amended Certificate of Incorporation and (b) the adoption of a proposed amendment of Article Tenth of said Amended Certificate of Incorporation, which plan and amendments are described in the Proxy Statement received by the undersigned with the Notice of said Meeting, and in the transaction of such other business as may properly be brought before said Meeting or any adjournment thereof; provided, however, that the undersigned hereby directs that such shares shall be voted as specified below on those proposals, to wit:

Approval of proposed stock option plan and adoption of proposed related amendment of Article Fourth of Amended Certificate of Incorporation
(The Management favors a vote FOR)

	FOR
	AGAINST

Adoption of proposed amendment of Article Tenth of Amended Certificate of Incorporation
(The Management favors a vote FOR)

	FOR
	AGAINST

and that, **if the undersigned fails to specify herein how such shares are to be voted on either of**

(Continued, and to be signed, on other side)

(Continued from other side)

said proposals, they shall be voted for said proposal; hereby ratifying all action of said proxies or any of them or their or his substitutes or substitute by virtue hereof; and hereby revoking any authorization to vote such shares heretofore given by the undersigned to anyone.

Dated and signed....., 1957. .....
(Signature)

PLEASE SIGN AND MAIL IN ENCLOSED ENVELOPE

Execution should be exactly in the name above shown; if by a corporation, in the manner usually employed by it; if by a fiduciary, the fiduciary's title should be shown.

BETHLEHEM STEEL CORPORATION

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

A Special Meeting of the Stockholders of Bethlehem Steel Corporation, a Delaware corporation, will be held at its principal office, at No. 100 West Tenth Street, Wilmington, Delaware, on Tuesday, September 17, 1957, at 12 o'clock Noon, Eastern Daylight Saving Time, to consider and take action with respect to:

(1) a proposed stock option plan of said Corporation and a proposed related amendment of the provisions of Article Fourth of the Amended Certificate of Incorporation of said Corporation;

(2) a proposed amendment of the provisions of Article Tenth of said Amended Certificate of Incorporation relating to the payment of executives of said Corporation of special incentive compensation; and

(3) such other business as may properly be brought before said Meeting.

Each of the proposals referred to in clauses (1) and (2) above is described in the attached Proxy Statement.

The Board of Directors has fixed 3:30 o'clock P. M., Eastern Daylight Saving Time, on August 5, 1957, as the record date for the determination of the stockholders who will be entitled to vote at said Meeting.

Wilmington, Delaware, August 7, 1957.

B. D. BROEKER, *Secretary.*

If you do not expect to be present at the above-mentioned Meeting, please date and sign the enclosed form of proxy and mail it promptly in the enclosed envelope.

The prompt return of proxies will save the Corporation the expense of further requests for proxies in order to insure a quorum.

PROXY STATEMENT

This statement is furnished in connection with the solicitation on behalf of the Management of Bethlehem Steel Corporation (hereinafter sometimes called the Corporation) of proxies for use at the Special Meeting of its Stockholders noticed to be held on September 17, 1957.

933,887 shares of Seven Per Cent. Cumulative Preferred Stock and 44,634,388 shares of Common Stock of the Corporation were outstanding at 3:30 P. M., Eastern Daylight Saving Time, on August 5, 1957. Each of such shares is entitled to one vote.

PROPOSED RESTRICTED STOCK OPTION PLAN AND RELATED AMENDMENT OF ARTICLE FOURTH OF CERTIFICATE OF INCORPORATION

One of the purposes of the Meeting is to consider and take action upon a restricted stock option plan and a related amendment of Article Fourth of the Amended Certificate of Incorporation of the Corporation authorizing the issue of the shares to be reserved for the purposes of such plan without offering such shares to stockholders for subscription.

After careful study, the Management has reached the conclusion that the Corporation's incentive compensation system, which is hereinafter described, can and should be improved by including as a part thereof a restricted stock option plan.

In 1950, Congress amended the Federal income tax laws to make it possible for a corporation to grant "restricted stock options" to employees under conditions that would not subject such employees to taxation at ordinary income tax rates. That action was taken by Congress in recognition of the importance of incentives in the efficient and profitable operation of American business and in further recognition of the fact that the continued high personal income tax rates have made the cash payments under many incentive compensation plans less effective as incentives than formerly. Subsequent to 1950 many leading American corporations have adopted restricted stock option plans for their key employees.

Since it has now become apparent that it is unlikely that there will be any substantial reduction in personal income tax rates for some time to come, the Management recommends the adoption at this time of a stock option plan. Specifically, it is proposed that that plan should provide for the granting to important employees of the Corporation and its subsidiaries, each year for five years, of options to purchase shares of the Common Stock of the Corporation as hereinafter described. The group to whom such options would be granted

would consist of from approximately 250 to 300 or more key employees, including, in addition to the executives of the Corporation and its subsidiaries who are also directors of the Corporation, managers of plants and other facilities, department heads, district and product sales managers, administrative and research officials, the principal assistants of all the foregoing, and other personnel having corresponding responsibilities for various parts of the business. As the business has expanded in recent years there has been a substantial increase in the number of such key employees (particularly those below the senior level) who are making important contributions to the success of the business and it is anticipated that the number may continue to grow. Since the senior executives of the future will come primarily from this group, it is the view of the Management that such key employees should have the opportunity afforded by a stock option plan to acquire a proprietary interest in the Corporation and participate in its future progress and success.

The added incentive that would be provided by such a stock option plan for those employees whose duties involve the exercise of judgment in making decisions and formulating policies for guiding the work of others and whose efforts most affect the earnings of the Corporation cannot fail to promote the welfare of stockholders generally. If such plan benefits the employees who participate in it, by permitting them to share in the enhanced value of the Common Stock of the Corporation resulting from their efforts, the plan will, to an even greater extent, benefit the stockholders as a whole.

It is also hoped that the long-term result of the proposed stock option plan will be to increase substantially the amount of Common Stock of the Corporation owned by the key employees, which is believed will be in the interest of the Corporation.

The Board of Directors has adopted the stock option plan described herein, subject to approval by the stockholders.

Outline of proposed stock option plan

A copy of the proposed stock option plan of the Corporation is attached hereto marked Exhibit 1, and reference thereto is made for a complete statement of its provisions. The following is an outline of certain of such provisions:

(i) There will be reserved for use upon the exercise of options under the plan an aggregate of 2,500,000 shares of the Common Stock of the Corporation. The maximum aggregate number of shares which may be covered by options granted in any Plan Year (ending August 31) is 500,000 (plus any shares covered by options which shall have theretofore expired or terminated).

(ii) While the plan is in effect (through August 31, 1962) an option will be granted in each Plan Year to each employee of the Corporation or any of its subsidiaries who shall also be a director of the Corporation (other than Mr. Eugene G. Grace, the Chairman and a director of the Corporation, who will not participate in the plan) and to each other employee selected by the Stock Option Plan Committee under the plan.

(iii) The number of shares of the Common Stock covered by the option to be granted to an individual employee in any Plan Year shall not exceed 10,000.

(iv) Subject to the limitations outlined above, the option granted in any Plan Year to each employee who shall also be a director of the Corporation shall cover such number of shares (rounded out, if not an even 100 shares or multiple thereof, to the next lower 100 share lot) as shall have an aggregate price equal to his current aggregate annual compensation from the Corporation and all corporations controlled by it and the option granted in any Plan Year to any other employee shall cover such number of shares as shall be determined by said Committee (not exceeding such number of shares, rounded out as stated above, as shall have an aggregate option price equal to his current aggregate annual compensation).

(v) The term of the options shall be ten years from the date of granting, subject to earlier termination as stated below.

(vi) The option price will be 95% of the fair market value of the Common Stock at the time of granting the option (that is, the mean of the high and low prices of the Common Stock on national securities exchanges on the day on which the option shall be granted). If the price so determined shall not be an even multiple of one dollar, it shall be rounded out to the next higher dollar per share. The option price will remain constant during the life of the option (subject to adjustment in the event of changes in capitalization of the Corporation), regardless of any changes in market value of the Common Stock, and the holder of the option upon exercising it in whole or in part will pay to the

Corporation in cash the full amount of the option price of the shares acquired by him upon such exercise. Such fair market value of the Common Stock, on July 24, 1957, was $49⅞ per share, but what it will be on the date or dates on which options shall be granted in the future cannot be predicted.

(vii) Each employee receiving an option will be required to agree that he will remain in the employ of the Corporation or one or more of its subsidiaries for a period of at least two years from the date on which his option shall be granted. If the holder of an option shall, during the period covered by his agreement to serve, be dismissed for cause or quit without consent of his employer, his option shall expire forthwith upon the termination of his employment. The Corporation or the employing subsidiary will not terminate the employment of the holder of an option without his consent during the first year of the term of the option, except for cause.

(viii) In all cases of termination of employment, other than by death or in violation of the agreement to serve referred to in clause (vii) above, the holder may exercise his option, to the extent exercisable at the date of such termination, within a period of three months after such termination. Upon the death of an employee, his option, to the extent exercisable at the date of his death, may be exercised by his legatee, personal representative or distributee within three years following his death.

(ix) An option shall not be exercisable prior to June 1, 1958, or prior to the expiration of the first six months of its term and, notwithstanding any other provision, shall terminate upon the expiration of 10 years from the date of granting thereof.

(x) Options will not be transferable, otherwise than by will or the laws of descent and distribution.

The shares to be acquired upon the exercise of options will, as the Board of Directors of the Corporation shall determine, be either authorized but unissued shares of the Common Stock or issued shares which shall have been reacquired by the Corporation.

The authorized Common Stock of the Corporation consists of 80,000,000 shares, of the par value of $8 each, of which 44,634,388 shares were outstanding at August 5, 1957. The 2,500,000 shares to be reserved for the purposes of the plan constitute approximately 5½% of the total number of shares outstanding at August 5, 1957.

The plan will be administered by a Stock Option Plan Committee to be appointed by the Board of Directors of the Corporation and to consist of not less than 3 members of the Board. Subject to the provisions of the plan, such Committee shall have authority to grant options, to interpret the plan and to make rules and regulations relating to it.

The plan may be terminated, modified or amended by the stockholders of the Corporation. The plan may also be modified or amended by the Board of Directors in such respects as it shall deem advisable in order that the options shall be "restricted stock options" as defined in Section 421 of the Internal Revenue Code of 1954 or to conform to any change in the law, or in any other respect which shall not change (i) the maximum numbers of shares for which options may be granted under the plan either in the aggregate or in any Plan Year or to any individual employee, or (ii) the manner of determining the option prices other than to change the manner of determining the fair market value of the Common Stock, as stated in clause (vi) on page 3 above, to conform with any then applicable provisions of the Internal Revenue Code or regulations thereunder, or (iii) the periods during which options may be granted or exercised, or (iv) the provisions relating to the determination of employees to whom options shall be granted and the numbers of shares to be covered by such options, or (v) the provisions relating to adjustments to be made upon changes in capitalization. The termination or any modification or amendment of the plan shall not, without the consent of an employee, affect his rights under an option theretofore granted to him.

A determination has not yet been made as to the identity or number of employees (in addition to employees who shall also be directors of the Corporation) who will in the future be granted options under the plan, if it shall be adopted. As stated above, however, it is contemplated that the total number of employees

to whom such options will be granted will be in the neighborhood of 250 to 300 or more.

It is impossible at the present time to determine the number of shares that will be covered by the options to be granted under the plan in any Plan Year either in the aggregate or to any individuals. In the case of each employee who shall also be a director of the Corporation the number of shares to be covered by his option will depend upon his compensation during the calendar quarter immediately preceding the granting of his option and upon the fair market value of the Common Stock at the date of the granting of his opinion. Assuming that (a) the compensation received by each of such employees in such calendar quarter will be the same as that received by him in the second quarter of 1957, and (b) the fair market value of the Common Stock on the date of the granting of his option (determined as provided in clause (vi) on page 3 above) will be the same as the fair market value of such Stock (determined as stated above) on July 24, 1957, then the number of shares that would be covered by the option granted to each such employee under the plan in each Plan Year would be as follows:

Name of director:	*Number of shares of common stock*
Donald T. Aikenhead	4,400
James P. Bender	5,400
Norborne Berkeley	9,900
Russell K. Branscom	3,900
Bernard D. Broeker	3,900
Frank R. Brugler	7,900
Stewart J. Cort	10,000
Harry C. Crawford	7,800
Paul B. Entrekin	3,600
Keenan L. Griffith	5,700
Arthur B. Homer	10,000
Jesse V. Honeycutt	9,600
Francis M. Huffman	4,000
William H. Johnstone	4,100
Paul S. Killian	7,800
Joseph M. Larkin	9,900
Robert E. McMath	10,000
Arthur F. Peterson	8,700
Ivor D. Sims	3,600
Daniel D. Strohmeier	8,900

Counsel for the Corporation have advised that, under the Internal Revenue Code of 1954, if shares of the Common Stock of the Corporation are acquired by the original holder of an option upon the exercise thereof, and if no disposition of such shares is made by him within two years from the granting of the option or within six months after the transfer to him of such shares, (i) no income will be realized by him at the time of transfer of the shares to him; (ii) when he sells the shares, any amount realized by him in excess of the option price will be taxed to him as a long-term capital gain and any loss sustained by him will be a long-term capital loss; and (iii) no deduction will be allowable to the Corporation for Federal income tax purposes in connection with the granting or exercise of the option.

An employee exercising an option granted to him under the plan may sell the Common Stock purchased at such time or times as he shall determine, either prior to the expiration of the two-year period or the six-month period mentioned above (thereby foregoing any tax advantage involved in a longer holding) or at any time after the expiration of such periods.

The Corporation will, prior to the time when any option may be exercised, register under the Securities Act of 1933, as amended, the shares of Common Stock to be reserved for the purposes of the plan.

Proposed amendment of article fourth of the amended certificate of incorporation of the corporation

Under the Amended Certificate of Incorporation of the Corporation, the holders of its Seven Per Cent. Cumulative Preferred Stock do not have any preemptive or preferential right to subscribe for any of the shares of the Common

Stock that will be reserved for the purposes of the proposed stock option plan. It will, however, be necessary in connection with the adoption of such plan to amend Article Fourth of the Amended Certificate of Incorporation of the Corporation so as to authorize the Corporation to issue the shares of its Common Stock reserved for such purposes without offering such shares to the holders of the outstanding shares of its Common Stock for subscription.

Specifically, the proposed amendment of Article Fourth of the Amended Certificate of Incorporation of the Corporation would add at the end thereof the following paragraph:

"None of the holders of the Common Stock shall as such holder have any right to subscribe for any shares of the Common Stock which the Corporation shall issue upon the exercise of options pursuant to the provisions of its Stock Option Plan approved by its stockholders on September 17, 1957, as from time to time amended in accordance with its terms."

The affirmative vote of a majority in interest of the Common Stock of the Corporation, in addition to the affirmative vote of a majority in interest of all the stock of the Corporation, is necessary to the approval and adoption of the proposed stock option plan of the Corporation and the related amendment of Article Fourth of its Amended Certificate of Incorporation.

PROPOSED AMENDMENT OF ARTICLE TENTH OF CERTIFICATE OF INCORPORATION RELATING TO SPECIAL INCENTIVE COMPENSATION

Another purpose of the Meeting is to consider and take action upon a proposed amendment of Article Tenth of the Amended Certificate of Incorporation of the Corporation relating to special incentive compensation to be paid to the persons who are in the employ of the Corporation of one or more of its subsidiary companies and are also directors of the Corporation. The proposed amendment would reduce the percentages to be applied to cash dividends paid on the Common Stock of the Corporation for the purpose of determining the aggregate amount to be paid as special incentive compensation.

Said Article Tenth provides, insubstance, that the aggregate amount of such speeial incentive compensation thereunder shall be equal to certain percentages of the aggregate amount of each cash dividend paid on the Common Stock of the Corporation as follows: On cash dividends paid during 1957, 6%; on those paid during 1958, 5½%; and on those paid during 1959 and subsequent years, 5%.

The percentages specified in the preceding paragraph reflect the amendments of Article Tenth that were adopted by the stockholders on January 17, 1957. In 1956 and prior years the percentage that was applied to the cash dividends paid on the Common Stock was 6⅔%, rather than the reduced percentages specified in the preceding paragraph.

The number of persons who are now entitled to payments of special incentive compensation under said Article Tenth is 21. Prior to April 25, 1957 (when the number of directors of the Corporation was increased to 21), the number of persons entitled to such payments thereunder was 15.

The plan provided for by said Article Tenth is one part of the general system of incentive compensation which has been employed by the Corporation and its subsidiaries for many years. Under that system it has been the practice of the Corporation and its subsidiaries to pay a substantial part of the compensation of their respective employees upon the basis of results accomplished. Many and varied methods are used in determining the amounts of incentive compensation so paid to such employees, each method being designed to suit the services of a particular group. All the incentive compensation is paid in cash.

The incentive compensation system is intended to offer to employees, including executives, a strong inducement in their own interests to exert their utmost efforts to obtain for the Corporation and its subsidiaries the best possible results. In the opinion of the Management the system has proved its worth and is responsible, to a very large extent, for the success of the Corporation.

Under present circumstances the Management believes that the percentages specified in said Article Tenth may be further reduced and still provide adequate incentive for the purposes of the Special Incentive Compensation Plan established by that Article. In making its recommendation to reduce such percentages, the Management has taken into account, among other things, the increase in the number of outstanding shares of the Common Stock resulting from the conversion earlier this year of a substantial amount of the Convertible Debentures of the Corporation and, also, the proposed stock option plan to be acted upon at this Meeting.

The specific recommendation of the Management is that such percentages now provided for in Article Tenth (6% for the remainder of 1957; 5½% for 1958; and 5% thereafter) be reduced to 4½%, effective at once. The proposed amendment would change the third paragraph of that Article to read as follows:

"Whenever any cash dividend shall be paid upon the Common Stock, there shall be paid to the executives of the Corporation an amount equal to 4½% of the aggregate amount of said cash dividend."

On the basis of (a) quarterly dividends on the Common Stock at the rate of 60¢ per share (the rate of such dividends in 1957 to the date of this Proxy Statement) and (b) the number of shares of the Common Stock of the Corporation that were outstanding on August 5, 1957, the aggregate amount of the special incentive compensation that would be payable on an annual basis pursuant to said Article Tenth under the percentages now specified in said Article Tenth and under the percentage proposed to be specified therein would be as follows:

Percentage	*Annual amount*
6% (percentage now in effect for 1957)[1]	$6,427,352
5½% (percentage now in effect for 1958)	5,891,739
5% (percentage now in effect after 1958)	5,356,127
4½% (percentage proposed to be in effect for last quarter of 1957 and thereafter)[1]	4,820,514

[1] The reduction from 6% to 4½% will be effective only for the last quarter of 1957.

The affirmative vote of a majority in interest of all the stock of the Corporation is necessary to the adoption of the proposed amendment of Article Tenth.

ADDITIONAL INFORMATION

Remuneration of directors and officers, etc.

The following table shows all direct remuneration paid by the Corporation and its subsidiaries during the year 1956 for services in all capacities to each person who was a director of the Corporation at any time during that year

(including each person who was one of the three highest paid officers of the Corporation [1] during that year):

Name of person	Capacities in which remuneration was received	Aggregate remuneration
Donald T. Aikenhead	Director, Treasurer and Assistant Secretary of the Corporation and director and officer or employee of 1 or more subsidiaries.	$192,253, including $164,753 of special incentive compensation paid under Article Tenth of Amended Certificate of Incorporation of the Corporation.[1]
James P. Bender	Director and Assistant Treasurer of the Corporation and officer or employee of 1 or more subsidiaries.	$254,671, including $219,671 of such special incentive compensation.[1]
Norborne Berkeley	Director of the Corporation and director and officer of 1 or more subsidiaries.	$499,340, including $439,340 of such special incentive compensation.[1]
Frank R. Brugler	Director and Comptroller of the Corporation and director and officer of 1 or more subsidiaries.	$269,671, including $219,671 of such special incentive compensation.[1]
Stewart J. Cort	Director of the Corporation and director and officer of 1 or more subsidiaries.	$529,340, including $439,340 of such special incentive compensation.[1]
Harry C. Crawford	Director of the Corporation and director and officer of 1 or more subsidiaries.	$374,507, including $329,507 of such special incentive compensation.[1]
Eugene G. Grace	Director and Chairman of the Corporation and director and officer of 1 or more subsidiaries.	$809,011, including $659,011 of such special incentive compensation.[1]
Keenan L. Griffith	Director of the Corporation and employee of 1 or more subsidiaries.	$269,671, including $219,671 of such special incentive compensation.[1]
Arthur B. Homer	Director and President of the Corporation and director and officer of 1 or more subsidiaries.	$669,176, including $549,176 of such special incentive compensation.[1]
Jesse V. Honeycutt	Director of the Corporation and director and officer of 1 or more subsidiaries.	$364,589, including $274,589 of such special incentive compensation.[1]
Paul S. Killian	Director of the Corporation and director and officer of 1 or more subsidiaries.	$374,507, including $329,507 of such special incentive compensation.[1]
Joseph M. Larkin	Director of the Corporation and director and officer of 1 or more subsidiaries.	$499,340, including $439,340 of such special incentive compensation.[1]
Robert E. McMath	Director, Vice President and Secretary of the Corporation and director and officer of 1 or more subsidiaries.	$514,340, including $439,340 of such special incentive compensation.[1]
Arthur F. Peterson [2]	Director of the Corporation and director and officer of 1 or more subsidiaries.	$434,424, including $384,424 of such special incentive compensation.[1]
Daniel D. Strohmeier	Director of the Corporation and director and officer of 1 or more subsidiaries.	$444,424, including $384,424 of such special incentive compensation.[1]

[1] Said Article Tenth, which provides for the payment of special incentive compensation, has been amended since the end of 1956. See the 2d, 3d and 4th paragraphs under the heading "Proposed Amendment of Article Tenth of Certificate of Incorporation Relating to Special Incentive Compensation."

[2] The Corporation owns a substantial part (ranging from 12½% to 50%) of the outstanding capital stock of each of 13 corporations, each of which is engaged in the mining of or prospecting for iron ore and/or the owning and/or the holding under lease of iron ore properties and/or the beneficiating of taconite, a low-grade iron ore, or the quarrying of limestone. The ownership by the Corporation of shares of the capital stocks of such 13 corporations is designed to make available to one or more subsidiaries of the Corporation a supply of iron ore or of limestone. At the request of the Corporation and in order to assure the representation of its interest in such 13 corporations, Mr. Peterson serves as the President or as a Vice President of each of them. Mr. Peterson does not have any financial interest, direct or indirect, in, and does not receive any remuneration from, any of them. The Corporation and/or one or more of its subsidiaries have from time to time engaged in, and, the Management expects, will in the future continue to engage in, transactions (some of which are or may be material) with such 13 corporations, including the lending of money to them and the acquisition from some or all of them of limestone, iron ore and/or the pellets containing iron that are produced by the beneficiation of taconite.

The direct aggregate remuneration paid by the Corporation and its subsidiaries during the year 1956 to all persons, as a group, who were directors and/or officers of the Corporation at any time during that year and while they, respectively, were such directors and/or officers for services in all capacities is $6,566,327, including $5,491,764 of special incentive compensation paid under said Article Tenth.[2]

[1] The term "officers of the Corporation", when used in this Proxy Statement, means its Chairman, President, Vice Presidents, Treasurer, Secretary and Comptroller.

[2] Said Article Tenth, which provides for the payment of special incentive compensation, has been amended since the end of 1956. See the second, third, and fourth paragraphs under the heading "Proposed Amendment of Article Tenth of Certificate of Incorporation Relating to Special Incentive Compensation."

Pension plan

The Amended Pension Plan of the Corporation and Subsidiary Companies provides,[3] in substance and among other things, that any Employee (as the term "Employee" is defined in the Plan, which includes any officer and also any director [4] other than a director active only in that capacity) who at the time of his retirement shall have had at least 15 years of continuous service (determined as provided in the Plan) and shall have attained the age of 65 years shall be entitled to a pension upon his retirement in a monthly amount (subject to the provisions of the plan relating to minimum pensions) equal to 1% of the average monthly compensation (including incentive compensation) received by him from one or more Employing Companies (as the term "Employing Company" is defined in the Plan) for services rendered during the 120 calendar months next preceding the month in which he shall retire multiplied by the number of years of his continuous service, reduced in the case of each pensioner by an amount determined as provided in the Plan in respect of primary old-age insurance benefits, if any, payable to him under Title II of the Federal Social Security Act and by the amount, if any, which he shall be otherwise entitled to receive as a pension or payment of similar kind under any law of the United States and from certain other sources described in the Plan. The Plan also provides that a pension may be paid to an Employee who shall have had at least 15 years of continuous service and who shall have become through some unavoidable cause permanently incapacitated or who for some other reason shall retire with the consent of the management of the Employing Company by which he shall then be employed. All moneys required for the payment of pensions under the Plan are provided by the Employing Companies, and all or any part of such moneys may be paid into one or more pension trusts.

In the following table are set forth certain examples showing the amount of the annual pensions [5] payable under the Pension Plan to Employees (in certain compensation classifications, which may be applicable to the directors and officers of the Corporation) who shall retire on or after attaining the age of 65 years and whose average annual compensation for the 120 calendar months next preceding the month in which they shall retire is in the respective amounts set forth in the first column of such table and who will have at the time of their retirement the respective numbers of years of continuous service specified in the headings of the other columns of such table:

Average annual compensation for 120 months next preceding retirement	Amount of Annual Pension [1]					
	15 years of service	20 years of service	25 years of service	30 years of service	35 years of service	40 years of service
$20,000	$3,000	$4,000	$5,000	$6,000	$7,000	$8,000
$50,000	7,500	10,000	12,500	15,000	17,500	20,000
$100,000	15,000	20,000	25,000	30,000	35,000	40,000
$200,000	30,000	40,000	50,000	60,000	70,000	80,000
$300,000	45,000	60,000	75,000	90,000	105,000	120,000
$400,000	60,000	80,000	100,000	120,000	140,000	160,000
$500,000	75,000	100,000	125,000	150,000	175,000	200,000

[1] Before deducting the amounts the deduction of which is required by the Pension Plan, including any amounts that are deductible in respect of primary old-age insurance benefits payable under Title II of the Federal Social Security Act.

In lieu of the pensions described above, in certain cases an Employee is at his election entitled to a reduced pension, of equivalent actuarial value, payable to him and his Beneficiary for life as specified in the Plan.

Miscellaneous

The Management does not know of any matters to be brought before said Meeting other than those which are described above. Proxies in the accom-

[3] Certain subsidiaries of the Corporation have agreed with certain labor unions, subject to obtaining the necessary corporate and tax approvals, to make certain changes in the Amended Pension Plan in so far as it applies to employees in the respective bargaining units represented by such unions.

[4] Mr. Grace, the Chairman of the Corporation, has waived all right to a pension under the Plan.

[5] Before deducting the amounts the deduction of which is required by the Pension Plan, including any amounts that are deductible in respect of primary old-age insurance benefits payable under title II of the Federal Social Security Act.

panying form will confer discretionary authority in respect of any such other matter. The shares covered by any such proxy that shall be properly executed and shall be received by the Management prior to the close of business on the day before said Meeting will be voted and, if the stockholder who shall execute such proxy shall specify in the maner stated therein how such shares shall be voted on either of the proposals which are referred to therein, they will be voted on such proposal as so specified.

A stockholder who shall sign and return a proxy in such form will have the power to revoke it at any time before it is exercised.

The cost of the solicitation of proxies in the accompanying form will be borne by the Corporation. In addition to the solicitation of proxies in such form by use of the mails, the Corporation expects that a number of the regular employees of the Corporation and/or one or more of its wholly-owned subsidiaries (none of whom will receive any compensation therefor in addition to his regular compensation) will solicit proxies in such form personally and by telephone.

Dated August 7, 1957.

B. D. BROEKER, *Secretary.*

EXHIBIT 1

STOCK OPTION PLAN OF BETHLEHEM STEEL CORPORATION

1. Purpose of the plan

This Stock Option Plan (hereinafter called the Plan) is intended to encourage ownership of stock of Bethlehem Steel Corporation (hereinafter called the Corporation) by important employees of the Corporation and its subsidiaries and to provide additional incentive for them to promote the success of the business.

2. Stock subject to the plan

There will be reserved for use upon the exercise of options to be granted from time to time under the Plan (hereinafter called Options) an aggregate of 2,500,000 shares of the Common Stock, of the par value of $8 per share (hereinafter called the Common Stock), of the Corporation, which shares may be in whole or in part, as the Board of Directors of the Corporation (hereinafter called the Board of Directors) shall from time to time determine, authorized but unissued shares of the Common Stock or issued shares of the Common Stock which shall have been reacquired by the Corporation. Options shall not be granted in any year ending with August 31 (hereinafter called Plan Year) for in excess of an aggregate of 500,000 shares of the Common Stock: *Provided, however,* that, if an Option shall expire or terminate for any reason without having been exercised in full, the unpurchased shares covered thereby shall (unless the Plan shall have been terminated) be added to the shares otherwise available for Options which may be granted in the same or any subsequent Plan Year.

3. Administration of the plan

The Board of Directors shall appoint a Stock Option Plan Committee (hereinafter called the Committee), which shall consist of not less than three members of the Board of Directors. Subject to the provisions of the Plan, the Committee shall have plenary authority in its discretion to determine the employees of the Corporation and its subsidiaries to whom Options shall be granted, the number of shares to be covered by each of the Options and the time or times at which Options shall be granted; to interpret the Plan; and to prescribe, amend and rescind rules and regulations relating to it; *provided, however,* that, in the case of employees who shall also be directors of the Corporation, Options shall be granted in accordance with the provisions of paragraphs 4 and 5 hereof. The Board of Directors may from time to time appoint members of the Committee in substitution for or in addition to members previously appointed and may fill vacancies, however caused, in the Committee. The Committee shall select one of its members as its chairman and shall hold its meetings at such times and places as it shall deem advisable. A majority of its members shall constitute a quorum. All action of the Committee shall be taken by a majority of its members. Any action may be taken by a written instrument signed by a majority of the members and action so taken shall be fully as effective as if it had been taken by a vote of a majority of the members at a meeting duly called and held. The Committee may appoint a secretary, shall keep minutes of its meetings and shall make such rules and regulations for the conduct of its business as it shall deem advisable.

4. Employees to whom options shall be granted

An Option shall be granted in each Plan Year

(a) to each person who shall be in the employ of the Corporation or in the employ of one or more of its present or future subsidiary corporations, as defined in Section 421 of the Internal Revenue Code of 1954 (herein called subsidiaries), and shall also be a director of the Corporation and

(b) to each other employee of the Corporation and/or one or more of its subsidiaries who shall be selected by the Committee,

whether or not in any case the grantee shall have received one or more Options hereunder in any previous Plan Year or Years. Any employee to whom an Option shall have been granted in any Plan Year and who shall thereafter in such Plan Year become a director of the Corporation shall not be granted another Option in such Plan Year.

5. Number of shares to be covered by options granted to individual employees

The number of shares of the Common Stock covered by the Option that shall be granted to any individual employee in any Plan Year shall not exceed 10,000. Subject to the limitations imposed by the foregoing provisions of the Plan, in any Plan Year the Option to be granted to an employee who at the date of the granting thereof shall also be a director of the Corporation shall cover, and any Option granted to any other employee shall cover not in excess of, such number of shares of the Common Stock (rounded out, if not an even 100 shares or multiple thereof, to the next lower 100 share lot) as shall have an aggregate option price equal to such employee's current aggregate annual compensation (including fixed salary and incentive compensation) from the Corporation and all corporations controlled by it. Such current aggregate annual compensation shall, in each case, be determined by multiplying by four the aggregate compensation received by him during the calendar quarter-year next preceding the date of the granting of his Option.

6. Factors to be considered in granting options

In making any determination as to employees (other than those who are also directors of the Corporation) to whom Options shall be granted and as to the number of shares to be covered by such Options, the Committee shall take into account the duties of the respective employees, their present and potential contributions to the success of the Corporation, and such other factors as the Committee shall deem relevant in connection with accomplishing the purpose of the Plan.

7. Option prices

The purchase price of the shares of the Common Stock which shall be covered by each Option shall be 95% of the fair market value of the Common Stock at the time of granting the Option. Such fair market value shall be deemed to be the mean of the high and low prices of the Common Stock on national securities exchanges on the day on which the Option shall be granted. If the price so determined shall not be an even multiple of one dollar, it shall be rounded out to the next higher dollar per share.

8. Term of options

The term of each Option shall be ten years from the date of granting thereof but shall be subject to earlier termination as hereinafter provided.

9. Exercise of options

An Option may be exercised, at any time or from time to time, as to any part of or all the shares which shall be covered thereby; *provided, however,* that (a) an Option may not be exercised as to less than 100 shares at any one time (or the remaining shares then purchasable under the Option, if less than 100 shares) and (b) an Option shall not be exercisable prior to June 1, 1958, or prior to the expiration of the first six months of its term. The purchase price of the shares as to which an Option shall be exercised shall be paid in full in cash at the time of exercise. Except as provided in paragraphs 12 and 13 hereof an Option may not be exercised at any time unless the holder thereof shall then be an employee of the Corporation or of a subsidiary. The holder of an Option shall not have any of the rights of a stockholder with respect to the shares covered by his Option except to the extent that one or more certificates for such shares shall be delivered to him upon the due exercise of the Option.

10. Nontransferability of options

An Option shall not be transferable otherwise than by will or the laws of descent and distribution, and an Option may be exercised, during the lifetime of the employee, only by him.

11. Employee's agreement to serve

Each employee receiving an Option shall, as one of the terms of the option agreement hereinafter referred to, agree that he will remain in the employ of the Corporation and/or one or more of its subsidiaries for a period of at least two years from the date on which the Option shall be granted to him; and that he will, during such employment, devote his entire time, energy and skill to the service of the Corporation and/or one or more of its subsidiaries, subject to vacations, sick leaves and other approved absences. Such employment, subject to the provisions of paragraph 12 hereof and subject also to the provisions of any contract between the Corporation or any such subsidiary and such employee, shall be at the pleasure of the Board of Directors of each employing corporation and at such compensation as such employing corporation or corporations shall reasonably determine. Any termination of such employee's employment during the period during which he has agreed pursuant to the foregoing provisions of this paragraph 11 to remain in employment that is either (i) for cause or (ii) voluntary on the part of the employee and without the consent of his employing corporation or corporations shall be deemed a violation by the employee of his agreement. In the event of such violation, any Option or Options held by him, to the extent not theretofore exercised, shall forthwith terminate.

12. Termination of employment

In the event that the employment of an employee to whom an Option shall have been granted shall be terminated (otherwise than by reason of death), such Option may, subject to the provisions of paragraph 11 hereof, be exercised (to the extent that the employee shall have been entitled to do so at the termination of his employment) at any time within three months after such termination, but not more than ten years after the date on which such Option shall have been granted. So long as the holder of an Option shall continue to be an employee of the Corporation and/or one or more of its subsidiaries his Option shall not be affected by (a) any change of duties or position or (b) any temporary leave of absence approved by each employing corporation. Nothing in the Plan or in any option agreement shall confer upon any employee any right to continue in the employ of the Corporation or of any of its subsidiaries or interfere in any way with the right of the Corporation or any such subsidiary to terminate his employment at any time; *provided, however*, that the employment of a recipient of an Option shall not be terminated without his consent during the first year of the term of such Option, except for cause.

13. Death of employee

If an employee to whom an Option shall have been granted shall die while he shall be employed by the Corporation and/or one or more of its subsidiaries or within three months after the termination of his employment, such Option may be exercised (to the extent that the employee shall have been entitled to do so at the date of his death) by a legatee or legatees of the employee under his last will or by his personal representatives or distributees, at any time within three years after his death (but not more than ten years after the date on which such Option shall have been granted).

14. Adjustments upon changes in capitalization

In the event of changes in the outstanding Common Stock of the Corporation by reason of stock dividends, split-ups, recapitalizations, mergers, consolidations, combinations or exchanges of shares, separations, reorganizations or liquidations, the number and class of shares available under the Plan in the aggregate and in any Plan Year and the maximum number of shares as to which Options may be granted to any employee shall be correspondingly adjusted by the Committee. No adjustment shall be made in the minimum number of shares which may be purchased at any time.

15. Effectiveness of the plan

The Plan shall become effective on such date as the Board of Directors shall determine, but only after (i) the stockholders of the Corporation shall, by the affirmative vote of a majority in interest of the Common Stock, in addition to the affirmative vote of a majority in interest of all the stock of the Corporation,

have approved the Plan, (ii) Article Fourth of the Amended Certificate of Incorporation of the Corporation shall have been amended in accordance with the General Corporation Law of the State of Delaware so as to authorize the Corporation to issue the shares of the Common Stock reserved for the purposes of the Plan without offering such shares to the holders of the outstanding shares of the Common Stock for subscription, (iii) the shares of the Common Stock reserved for the purposes of the Plan shall have been duly listed, upon official notice of issuance, upon the New York Stock Exchange and registered under the Securities Exchange Act of 1934, as amended, and (iv) the Board of Directors shall have been advised by counsel that all applicable legal requirements have been complied with.

16. Time of granting options

Neither anything contained in the Plan or in any resolution adopted or to be adopted by the Board of Directors or the stockholders of the Corporation nor any action taken by the Committee shall constitute the granting of any Option. The granting of an Option shall take place only when a written option agreement substantially in the form of the option agreement which is attached hereto marked Schedule A shall have been duly executed and delivered by or on behalf of the Corporation and the employee to whom such Option shall be granted.

17. Termination and amendment of the Plan

The Plan shall terminate on August 31, 1962, and an Option shall not be granted under the Plan after that date. The Plan (including the form of option agreement which is attached hereto marked Schedule A) may at any time or from time to time be terminated, modified or amended by the stockholders of the Corporation, by the affirmative vote of a majority in interest of the Common Stock, in addition to the affirmative vote of a majority in interest of all the stock of the Corporation. The Board of Directors may at any time and from time to time modify or amend the Plan (including such form of option agreement) in such respects as it shall deem advisable in order that the Options shall be "restricted stock options" as defined in Section 421 of the Internal Revenue Code of 1954 or to conform to any change in the law, or in any other respect which shall not change (i) the maximum numbers of shares for which Options may be granted under the Plan either in the aggregate or in any Plan Year or to any individual employee, or (ii) the manner of determining the option prices other than to change the manner of determining the fair market value of the Common Stock for the purposes of paragraph 7 hereof to conform with any then applicable provisions of the Internal Revenue Code or regulations thereunder, or (iii) the periods during which Options may be granted or exercised, or (iv) the provisions relating to the determination of employees to whom Options shall be granted and the numbers of shares to be covered by such Options, or (v) the provisions relating to adjustments to be made upon changes in capitalization. The termination or any modification or amendment of the Plan shall not, without the consent of an employee, affect his rights under an Option theretofore granted to him.

SCHEDULE A

OPTION AGREEMENT made this day of , 19 , between BETHLEHEM STEEL CORPORATION, a Delaware corporation (hereinafter called the Corporation), and , an employee of the Corporation and/or one or more of its subsidiaries (hereinafter called the Employee).

The Corporation desires, by affording the Employee an opportunity to purchase shares of its Common Stock, of the par value of $8 per share (hereinafter called the Common Stock), as hereinafter provided, to carry out the purpose of the "Stock Option Plan of Bethlehem Steel Corporation", approved by its stockholders on September 17, 1957:

NOW THEREFORE, in consideration of the mutual covenants hereinafter set forth and for other good and valuable consideration, the parties hereto have agreed, and do hereby agree, as follows:

1. The Corporation hereby irrevocably grants to the Employee the right and option (hereinafter called the Option) to purchase all or any part of an aggregate of shares of the Common Stock (such number being subject to adjustment as provided in paragraph 8 hereof) on the terms and conditions herein set forth.

2. The purchase price of the shares of the Common Stock covered by the Option shall be $ per share flat.

3. The term of the Option shall be for a period of ten years from the date hereof, subject to earlier termination as provided in paragraphs 5, 6 and 7 hereof. The Option may be exercised, at any time or from time to time, as to any part of or all the shares covered thereby; *provided, however,* that (a) the Option may not be exercised as to less than 100 shares at any one time (or the remaining shares then purchasable under the Option, if less than 100 shares) and (b) the Option shall not be exercisable prior to the expiration of six months from the date hereof.[1] The purchase price of the shares as to which the Option shall be exercised shall be paid in full in cash at the time of exercise. Except as provided in paragraphs 6 and 7 hereof, the Option may not be exercised at any time unless the Employee shall then be an employee of the Corporation or of a subsidiary. The holder of the Option shall not have any of the rights of a stockholder with respect to the shares covered by the Option except to the extent that one or more certificates for such shares shall be delivered to him upon the due exercise of the Option. The Option may not be exercised unless at the date of exercise a registration statement under the Securities Act of 1933, as amended, relating to the shares covered by the Option shall be in effect. The Corporation will endeavor to obtain prior to the time when the Option would otherwise be exercisable the registration of the shares covered by the Option under said Act, as amended.

4. The Option shall not be transferable otherwise than by will or the laws of descent and distribution, and the Option may be exercised, during the lifetime of the Employee, only by him. More particularly (but without limiting the generality of the foregoing), the Option may not be assigned, transferred (except as aforesaid), pledged or hypothecated in any way, shall not be assignable by operation of law and shall not be subject to execution, attachment or similar process. Any attempted assignment, transfer, pledge, hypothecation or other disposition of the Option contrary to the provisions hereof, and the levy of any execution, attachment or similar process upon the Option, shall be null and void and without effect.

5. In consideration of the granting of the Option and regardless of whether or not the Option shall be exercised, the Employee will remain in the employ of the Corporation and/or one or more of its subsidiaries for a period of at least two years from the date hereof; and he will, during such employment, devote his entire time, energy and skill to the service of the Corporation and/or one or more of its subsidiaries, subject to vacations, sick leaves and other approved absences. Such employment, subject to the provisions of paragraph 6 hereof and subject also to the provisions of any contract between the Corporation or any such subsidiary and the Employee, shall be at the pleasure of the Board of Directors of each employing corporation and at such compensation as such employing corporation or corporations shall reasonably determine. In the event of any termination of the Employee's employment during the period during which he has agreed by the foregoing provisions of this paragraph 5 to remain in employment that is either (i) for cause or (ii) voluntary on the part of the Employee and without the consent of his employing corporation or corporations, the Option (and any other option or options held by him under the above-mentioned Stock Option Plan), to the extent not theretofore exercised, shall forthwith terminate.

6. In the event that the employment of the Employee shall be terminated (otherwise than by reason of death), the Option may, subject to the provisions of paragraph 5 hereof, be exercised by the Employee (to the extent that he shall have been entitled to do so at the termination of his employment) at any time within three months after such termination, but not more than ten years after the date hereof. So long as the Employee shall continue to be an employee of the Corporation and/or one or more of its subsidiaries the Option shall not be affected by (a) any change of duties or position or (b) any temporary leave of absence approved by each employing corporation. Nothing in this Option Agreement shall confer upon the Employee any right to continue in the employ of the Corporation or of any of its subsidiaries or interfere in any way with the right of the Corporation or any such subsidiary to terminate his employment at any time; *provided, however,* that the employment of the Employee shall not be

[1] In the case of any Option Agreement that shall be entered into prior to December 1, 1957, the date "June 1, 1958" will be substituted for the words "the expiration of six months from the date hereof."

terminated without his consent during the first year of the term of the Option, except for cause.

7. If the Employee shall die while he shall be employed by the Corporation and/or one or more of its subsidiaries or within three months after the termination of his employment, the Option may be exercised (to the extent that the Employee shall have been entitled to do so at the date of his death) by a legatee or legatees of the Employee under his last will, or by his personal representatives or distributees, at any time within three years after his death, but not more than ten years after the date hereof.

8. If all or any portion of the Option shall be exercised subsequent to any stock dividend, split-up, recapitalization, merger, consolidation, combination or exchange of shares, separation, reorganization or liquidation occurring after the date hereof, as a result of which shares of any class shall be issued in respect of outstanding shares of Common Stock, or shares of Common Stock shall be changed into the same or a different number of shares of the same or another class or classes, the person or persons so exercising the Option shall receive, for the aggregate price paid upon such exercise, the aggregate number and class of shares which, if shares of Common Stock (as authorized at the date hereof) had been purchased at the date hereof for the same aggregate price (on the basis of the price per share set forth in paragraph 2 hereof) and had not been disposed of, such person or persons would be holding, at the time of such exercise, as a result of such purchase and all such stock dividends, split-ups, recapitalizations, mergers, consolidations, combinations or exchanges of shares, separations, reorganizations or liquidations; *provided, however*, that no fractional share shall be issued upon any such exercise, and the aggregate price paid shall be appropriately reduced on account of any fractional share not issued. No adjustment shall be made in the minimum number of shares which may be purchased at any one time, as fixed by paragraph 3 hereof.

9. Subject to the terms and conditions of this Option Agreement, the Option may be exercised by written notice to the Corporation, at its Stock Transfer Department, which is now located at the office of Bethlehem Steel Company, 25 Broadway, New York 4, N. Y. Such notice shall state the election to exercise the Option and the number of shares in respect of which it is being exercised and shall be signed by the person or persons so exercising the Option. Such notice shall either (a) be accompanied by payment of the full purchase price of said shares, in which event the Corporation shall deliver a certificate or certificates representing said shares as soon as practicable after the notice shall be received, or (b) fix a date (not less than five nor more than ten business days from the date such notice shall be received by the Corporation) for the payment of the full purchase price of said shares at said Stock Transfer Department, against delivery of a certificate or certificates representing said shares. Payment of such purchase price shall, in either case, be made by check payable to the order of the Corporation. The certificate or certificates for the shares as to which the Option shall have been so exercised shall be registered in the name of the person or persons so exercising the Option (or, if the Option shall be exercised by the Employee and if the Employee shall so request in the notice exercising the Option, shall be registered in the name of the Employee and another person jointly, with right of survivorship) and shall be delivered as aforesaid to or upon the written order of the person or persons exercising the Option. In the event the Option shall be exercised, pursuant to paragraph 7 hereof, by any person or persons other than the Employee, such notice shall be accompanied by appropriate proof of the right of such person or persons to exercise the Option. All shares that shall be purchased upon the exercise of the Option as provided herein shall be fully paid and non-assessable.

10. The Corporation shall at all times during the term of the Option reserve and keep available such number of shares of Common Stock as will be sufficient to satisfy the requirements of this Option Agreement, shall pay all original issue and/or transfer taxes with respect to the issue and/or transfer of shares pursuant hereto and all other fees and expenses necessarily incurred by the Corporation in connection therewith and will from time to time use its best efforts to comply with all laws and regulations which, in the opinion of counsel for the Corporation, shall be applicable thereto.

11. As used herein, the term "subsidiary" shall mean any present or future corporation which would be a "subsidiary corporation" of the Corporation, as that term is defined in Section 421 of the United States Internal Revenue Code of 1954.

IN WITNESS WHEREOF, the Corporation has caused this Option Agreement to be duly executed by its officers thereunto duly authorized, and the Employee has hereunto set his hand and seal, all on the day and year first above written.

BETHLEHEM STEEL CORPORATION,

by _____
Vice-President.

_____ [L. S.],
Employee

Attest:

_____ _____,
Assistant Secretary.

BETHLEHEM STEEL CORP.,
New York, 4, N. Y., November 11, 1957.

Hon. JOSEPH C. O'MAHONEY,
Antitrust and Monopoly Subcommittee, Committee on the Judiciary,
United States Senate, Washington, D. C.

DEAR SENATOR O'MAHONEY: I am sorry that circumstances have delayed me in supplying for the record the answers to several questions which you asked me when I was before the subcommittee on October 21, 1957.

At the present time, Bethlehem Steel Corp. has approximately 148,000 stockholders. We do not customarily keep any running tabulation of the holdings of stockholders by size groups, but since my return from Washington I have had our stock transfer department make a classification by size groups of the holders of our common stock as at the close of business on August 5, 1957. That was the record date for the determination of stockholders entitled to vote at the special meeting of our stockholders held on September 17, 1957, and is the most recent date as of which we could, without a great amount of extra work, make a classification. The classification, which shows the holdings of stockholders by the same size groups used by the New York Stock Exchange in a recent study of this kind, is as follows:

Number of shares held	Number of shareholder accounts	Aggregate number of shares
1 to 99	55,269	2,122,845
100 to 999	65,222	17,254,653
1,000 to 9,999	5,177	10,221,391
10,000 and over	299	15,035,499
Total	125,967	44,634,388

We cannot readily determine how many of our stockholders are incorporated entities, but I can assure you that none of our directors is a director of any corporate stockholder. As I indicated in the course of my testimony on October 21, 1957, none of our directors has any business loyalty to or fiscal arrangement or association with any corporation or other entity with whom we do business.

Bethlehem Steel Corp. has approximately 90 wholly owned subsidiary corporations and it has, directly or indirectly through subsidiaries, interests, representing less than complete ownership, in about 40 other corporations engaged in holding and operating raw material properties of various kinds. Most of those approximately 130 corporations were incorporated in various States of the United States but a few of them were incorporated in foreign countries. The limitations in the charters of those corporations on the powers of the directors and officers are, generally speaking, those required by the laws of the several jurisdictions under which they were incorporated.

The last meeting of the stockholders of Bethlehem was the above-mentioned one on September 17, 1957. On August 5, the record date for that meeting, there were outstanding 45,568,275 shares of common and preferred stock, held by 142,237 stockholders. There were present in person or represented by proxy at the meeting 31,836,720 shares of stock, or approximately 70 percent of the total number of shares, held by 92,033 stockholders, or approximately 65 percent of the total number of stockholders. The principal matter submitted to the meeting was the proposed adoption of the stock option plan which was referred to in the

course of my testimony on October 21, 1957. The plan was approved by the favorable vote of more than 94 percent of the shares voted, representing more than 92 percent of the number of stockholders who voted.

I trust that the foregoing is the information that you desire.

Very truly yours,

A. B. HOMER, *President.*

ANTITRUST AND MONOPOLY SUBCOMMITTEE,
November 18, 1957.

Mr. A. B. HOMER,
President, Bethlehem Steel Corp.,
New York, N. Y.

DEAR MR. HOMER: I wish to acknowledge receipt of your letter of November 14, setting forth therein comments and explanations with reference to a tabulation entitled "Selling, General, and Administrative Expense in Percentage of Net Sales, 10 Largest Steel Manufacturers 1950–56," which was made a part of the proceedings in the steel hearings at page 2259 of the transcript. You request that your letter be made a part of the record.

I have directed that your letter be examined by the subcommittee staff and that it be made a part of the record, together with any comments that the staff might desire to make in connection therewith, if any.

Sincerely,

ESTES KEFAUVER, *Chairman.*

BETHLEHEM STEEL CORP.,
New York, N. Y., November 14, 1957.

Hon. ESTES KEFAUVER,
Chairman, Antitrust and Monopoly Subcommittee, Committee on the Judiciary, United States Senate, Washington, D. C.

DEAR SENATOR KEFAUVER: My attention has been called to the fact that on November 4, 1957, during the appearance before the subcommittee of Mr. Humphrey, there was made part of the record a tabulation entitled, "Selling, General, and Administrative Expense in Percentage of Net Sales 10 Largest Steel Manufacturers 1950–56." The tabulation appears at page 2259 of the daily report of proceedings of the current hearings on administered prices. At page 2265 of the same report of proceedings you are quoted as referring to the fact that according to the tabulation the selling, general, and administrative expense of National Steel Corp. for the year 1956 was 3.68 percent of its net sales and that in the same year the corresponding figure for Bethlehem was 10.78 percent.

As you may recall, in the course of my appearance before the subcommittee on the morning of October 21, 1957, I made the statement that Bethlehem's administrative, selling, and general expense was approximately 3.3 percent of its revenues (report of proceedings, October 21, 1957, p. 1573).

When my attention was called to the above-mentioned tabulation that was made part of the record on November 4, 1957, and to the statement attributed to you on the above-mentioned page 2265, I was quite disturbed, in view of the statement which I had made to you on October 21, 1957. I have accordingly had our accounting department examine the tabulation that was made part of the record on November 4, 1957, and I am advised that the purported selling, general, and administrative expense attributed to Bethlehem in each of the years 1950–56 included, in addition to the selling, general, and administrative expense as reported in Moody's Industrial Manual for 1957, the amounts of the provisions made by Bethlehem for depreciation, depletion, and amortization, doubtful accounts receivable, pensions, unemployment and old age social insurance taxes and Railroad Retirement Act taxes and all other taxes except Federal income taxes.

I am also advised that the percentages shown in the tabulation for National Steel Corp., United States Steel Corp., Republic Steel Corp., Jones & Laughlin Steel Corp., Armco Steel Corp., and Wheeling Steel Corp. were apparently derived by considering the selling, general, and administrative expense of the particular company as being only the amount shown for that item in Moody's. The percentages shown for the Youngstown Sheet & Tube Co. were apparently derived by adding to its selling, general, and administrative expenses as shown

in Moody's the amounts shown therein as provisions for bad debts and for "other general expense," including such items as rents and royalties and taxes other than Federal income taxes. In the case of Inland Steel Co., there were apparently added to its selling, general, and administrative expenses as shown in Moody's its provisions for amortization and for bad debts. In the case of Colorado Fuel & Iron Corp., there were apparently added to its selling, general, and administrative expenses the amounts of its provisions for bad debts.

I need hardly say that I consider that the staff of the subcommittee was in error in adding to the selling, administrative, and general expense of Bethlehem the other unrelated accounting provisions to which I have referred. The effect of the addition was, for example, to increase Bethlehem's selling, administrative, and general expense for the year 1956 from $78,352,552 to $250,718,290, or from 3.37 percent of net billings to 10.78 percent thereof. I am advised that if similar treatment had been given to the figures relating to National Steel Corp. and United States Steel Corp., the result, for the year 1956, would have been to increase the percentage of National from the 3.68 percent shown in the tabulation to 12.67 percent (from $24,475,512 to $84,187,653) and to increase the figure for United States Steel Corp. from 3.79 percent to 16.29 percent (from $159,335,273 to $684,077,657).

If in the tabulation the figures for Bethlehem had been prepared on the basis which was used in the cases of National Steel Corp. and United States Steel Corp., the figures for the three companies would have been as follows:

	National	Bethlehem	United States Steel
1956	3.68	3.37	3.79
1955	3.45	3.49	3.60
1954	4.00	3.68	4.14
1953	3.27	2.90	3.65
1952	3.39	3.05	3.67
1951	2.89	2.78	3.21
1950	2.96	3.22	3.19

I am sure that in making the tabulation a part of the record of the proceedings and in commenting thereon you were not aware of the fact that the staff of the subcommittee had prepared the figures relating to Bethlehem on a completely unjustifiable basis which resulted in attributing to Bethlehem's administrative, selling, and general expense all its reserves for doubtful accounts, receivable, its provisions for pensions and social-security taxes and Railroad Retirement Act taxes for all its employees, all its real property taxes and all its other taxes except Federal income taxes and all its provisions for depletion, amortization and depreciation other than the depreciation provided through charges to manufacturing cost and operating expense.

In view of the fact that the tabulation was made part of the record and of the further fact that you commented thereon, it seems to me necessary that I write you about the matter. I request that this letter be made part of the record.

Very truly yours,

A. B. HOWER, *President.*

SUBCOMMITTEE MEMO ON LETTER OF NOVEMBER 14, 1957, FROM BETHLEHEM STEEL CORP.

NOVEMBER 20, 1957.

To: Paul Rand Dixon, Counsel and Staff Director.
From: John M. Blair, Chief Economist.
Subject: Letter of Mr. A. B. Homer, president of Bethlehem Steel, dated November 14, 1957, on selling, general, and administrative expenses.

In a letter of November 14, 1957, Mr. A. B. Homer, president of Bethlehem Steel Corp., criticizes a table placed in the record comparing selling, general, and administrative expense as a percent of the sales dollar for the 10 leading steel companies. It would appear from an examination of the underlying data that Mr. Homer's comments are well taken.

The table in question, "Selling, general, and administrative expense in percentage of net sales, 10 largest steel manufacturers, 1950–56," was copied directly, without change, from Moody's Manual for 1957 from the appropriate line under the subheading "Analysis of Operations" for each company.

While the wording in the stubs for this item for these 10 companies shows minor variations, the percentages were assumed to be comparable. Careful reading of the introduction, on page iv of the 1957 Manual, and the "Definitions," on pages ix and x, leads to the inference that "Financial and operating data" ratios, and "Analysis of operations" percentages are computed on the same general basis for different companies "in the same line of business"; this is indicated by the following extracts from the "Definitions" section:

"In addition to financial and operating ratios now shown in the statements of a considerable number of companies throughout the Manual, we also show a percentage analysis of operations, representing a breakdown of income account figures on a percentage basis by years for a 7-year period and affording *a convenient comparison of income accounts of companies in the same line of business*, and for tracing the distribution of revenues from sales to net profits. By use of these percentages, changes in costs such as labor and materials, the relation of taxes to volume of sales, etc., becomes more understandable. Also, it is more readily apparent whether expansion of sales has occurred at the expense of profits.

"The financial and operating ratios given are of a practical nature for the purpose of making the facts and figures shown of greater informative value (p. ix).

"In the presentation of financial statements as well as other statistical material, editorial judgment has been exercised by combining or segregating items for the purpose of achieving clarity and/or *uniformity*"[1] (p. x).

DEPARTMENT OF STATE DOCUMENTS

[Unclassified]

Air priority. Desp. No. 317
From: AmEmbassy, VIENNA. October 15, 1957
To: Department of State.
Reference: CA–3185, 10/3/57; Embdesp 593, 11/19/54; Embdesp 66 Appendix A, 7/18/56; Embdesp 440, 11/15/56.
Subject: New Technological Developments in Iron and Steel Production.

The following information is submitted as requested for use by the Senate Subcommittee on Antitrust and Monopoly.

I. Direct reduction of iron

No development work is going on in Austria. However, the West German subsidiary of the Austrian firm Gebr. Boehler A. G., which is located at Duesseldorf-Oberkassel is a member of the organization, Rennanlage Rhein-Ruhr GbR, Essen, which includes the following member firms:

Bochumer Verein fuer Gusstahlfabr. A. G., Bochum
Deutsche Edelstahlwerke A. G., Krefeld
Eschweiler Bergwerksverein, Huettenbetriebe, Eschweiler-Aue
Gusstahlwerk Witten A. G., Witten
Hessische Berg- u. Huettenwerke A. G., Wetzlar
Huettenwerk Rheinhausen A. G., Rheinhausen
Stahlwerke Suedwestfalen A. G., Geisweid
Gebr. Boehler A. G., Duesseldorf-Oberkassel

The purpose of the forementioned organization, according to industry sources in Austria, is to develop a process which may fall within the purview of this section and which is described below.

The main item of the Essen plant is a long inclined rotary kiln of 60–100 meters length and 6 meters in diameter which is fed on the upper end with a mixture of ore fines and solid fuel. The kiln is fired from the lower end by gas or oil. The molten iron agglomerates in small pellets and is poured together with slag into a water basin from the lower end of the kiln. The iron pellets are segregated from slag by electric magnets and can then be fed to steel furnaces instead of scrap. The advantage of these iron pellets is the comparatively high purity. At present the organization Rennanlage Rhein-Ruhr GbR is operating only a pilot plant. The erection of a commercial scale plant in Essen-Bohrbeck is planned.

Similar plants, however, not designed or operated by Rennanlage Rhein-Ruhr GbR, are said to exist in Frankenstein (Poland), Koenigshof (Czechoslovakia),

[1] Italic added.

Salzgitter-Wattensted (West Germany), Anzan (China, Manchuria), Seishin (probably South Korea), Kuji (Japan), Unterwellenborn (East Germany), Aviles (Spain), Larymna (Greece).

II. Oxygen converters

See Embdesp 440, November 15, 1956.

It was indicated in this despatch that VOEST acquired the Swiss firm Brassert Oxygen Technik A. G. (BOT). In the meantime VOEST sold 50 percent of its share to the Alpine Montan Co., and as a result of this transaction BOT is owned on a 50–50 basis by the two largest steel mills is Austria (both of which are nationalized).

The specific questions of the Department's Circular are answered as follows:

(*a*) The process has been in commercial operation in Austria since 1952.

(*b*) The process is successful, as is proven by the facts that Austria has up to now produced in this way more than 3.5 million metric tons of steel ingots and that Austria presently produces about 45 percent of its ingots by the oxygen-jet converter process, also known here as the "LD" (Linz-Donawitz) process.

(*c*) It is a scrap-saving process; the produced steel is of good quality, at least equivalent to open-hearth grades, in some cases even superior to open-hearth steel (better welding and deep drawing properties).

(*d*) The cost of an oxygen steel converter department amounts only to about 60 percent of the investment cost of open-hearth facilities of corresponding size.

(*e*) This process may be of particular importance for countries which face a shortage of steel scrap.

(*f*) The LD process as indicated by its name was pioneered by VOEST at Linz, and Alpine Montan Co. at Donawitz, which are the two largest steel mills in Austria. The first has a labor force of almost 20,000 people and the latter 25,000.

There follows a list of new oxygen steel converter departments which either have gone into operation recently or will be completed very soon. This list supplements data given in Embdesp 440.

Jones and Laughlin in Pittsburgh; annual capacity 750,000 tons; start of operation October 15, 1957. (This is the second plant in the United States.)

Kaiser Steel Corp., Fontana, California; annual capacity about 750,000 tons; start of operations January 1958.

Yawata, Japan; annual capacity about 350,000 tons; start of operations October 1957.

Nippon-Kokan, Japan; annual capacity about 350,000 tons; start of operations February 1958.

Bochumer Verein, Bochum; annual capacity 250,000 tons. (This is the second plant in West Germany.)

Sault Saint Marie, Canada; annual capacity 300–400,000 tons; start of operations 1958. (This is the second plant in Canada.)

Many other plans in various countries are in a more or less advanced stage of planning.

III. Continuous steel casting

See Embdesp 593, November 19, 1954 (page 18).

In Austria there are two plants in operation, one at Kapfenberg, Styria, belonging to the firm Gebr. Boehler A. G., and a smaller one at Wartberg, Styria, of Eisenwerke Breitenfeld (Vogel and Noot).

Both firms together with VOEST and Alpine Montan Co. are members of the organization, Austrian Society for Continuous Casting (Oesterreichische Stranggussgemeinschaft). The firm Schoeller-Bleckmann, which formerly was also a member of this organization, left it only recently, since it is erecting a continuous casting department according to the Rossi design, whereas the Oesterreichische Stranggussgemeinschaft is using the Junghans-Mannesmann design. Within Oesterreichische Stranggussgemeinschaft the firm Gebr. Boehler A. G. is the leading firm. Oesterreichische Stranggussgemeinschaft is cooperating with the corresponding outfit in West Germany: Deutsche Stahl-Stranggussgemeinschaft, Duesseldorf. In the latter organization, the West German steel firm Mannesmann is the leading factor. Both societies interchange patent rights and know-how; in addition they divide the export markets among themselves.

There follow answers to the specific questions of the Department.

(*a*) The process is in commercial operation for certain types of steels both at Kapfenberg (Boehler) and at Wartberg (Eisenwerk Breitenfeld).

(*b*) Both firms are reasonably successful in their operations. However, further development work is going on in order to expand the range of types of special steels converted from molten steel into semi-finished shapes by continuous casting.

(*c*) Principal advantages are: Avoidance of losses by cropping; no ingot molds and no stripping equipment; no blooming mill and no soaking bits; same quality as steels manufactured by conventional processes.

(*d*) First costs are only a fraction of the investment cost of conventional type equipment.

(*e*) This new technique is now gaining headway only at a comparatively slow rate, largely due to the considerable pioneering difficulties encountered and to the natural tendency of potentially interested firms to wait until others had led the process out of the experimental stage.

(*f*) Pioneering work was done by large and medium-sized firms.

As already mentioned above, also the second largest manufacturer of special steels in Austria, i. e., the firm of Schoeller-Bleckmann is interested in the continuous casting process. Its new department (of Rossi design) is being erected at the Ternitz plant, Lower Austria, of the firm and it will be completed toward the end of this year. Blueprints for the plants were supplied by Concast A. G., Stockerstrasse 33, Zurich 2, Switzerland, which is a subsidiary of the United States parent firm. The main reason that Schoeller-Bleckmann changed from Junghans-Mannesmann to Rossi design was that it was chiefly interested in the continuous casting of stabilized austenitic stainless steels. Junghans-Mannesmann were not prepared to give assurances that this type of steel could be produced, whereas Rossi promised that its equipment would do the job.

The attitude of Schoeller-Bleckmann toward continuous casting is somewhat different from that of Gebr. Boehler. The main reason that Gebr. Boehler is using this process is to do a certain amount of pioneer work in this field and to keep itself abreast of the development in continuous casting; in addition Gebr. Boehler is using the process largely for types of steels which cannot easily be processed in a blooming mill. It may be mentioned that the firm Gebr. Boehler has a modern blooming mill which was erected only a few years ago. Schoeller-Bleckmann has only a very old and completely inadequate blooming mill at its Ternitz plant where the steelmaking facilities are. Now Schoeller-Bleckmann is erecting a seamless pipe mill (extrusion press using the Sejournet-Ugine process) with an annual capacity of 30,000 tons, which will absorb a portion of the existing ingot capacity of the Ternitz plant. Concerning the remaining part, Schoeller-Bleckmann plans to further process this amount of steel in a continuous-casting plant which in the beginning is supposed to pour 1,300 metric tons of billets and 2,200 metric tons of slabs per month in one shift. It is expected that the output can be increased to 5,000 tons per month.

IV. Planetary mills (hot rolled)

No such equipment exists in Austria but Gebr. Boehler A. G. in its Ybbstal plants, Lower Austria plans to erect such a rolling mill for bands of tool steels and stainless steels. However, these plans are in a very preliminary stage.

For the Ambassador:

THEODORE J. HADRABA,
Counselor of Embassy for Economic Affairs.

[Unclassified]

Desp. No. 427
OCTOBER 21, 1957.

From: Amembassy Stockholm.
To: The Department of State, Washington.
Reference: Dept. CA–3185, October 3, 1957; CERP, Section C, Item 7 (supplemental to Embdes No. 299, Sept. 13, 1957).
Subject: New Technological Developments in Iron and Steel Production.

In compliance with the Department's CA under reference, there is given below a brief review of new technological developments that have been achieved in Swedish iron and steel production based on information obtained from the Swedish Ironworks Association and from the Embassy's files.

A. Direct reduction of iron

For several years two processes have been in commercial operation for the direct reduction of iron, namely, the Höganäs process, developed by the firm Höganäs-Billesholms AB, and the Wiberg-Söderfors process, developed by Stora Kopparbergs Bergslags AB, owner of Sweden's largest steel mill. The utilization of sponge iron in steelmaking is reported to be very successful, and the process is being used on an increasing scale by leading quality steelmakers since it rids them of their dependence on high-grade pig iron and costly prime steel scrap in making specialty steels.

Due to economies achieved in fuel consumption and in the steelmaking process as a whole, considerable importance is attached by the Swedish steel industry to the use of sponge iron in making fine steels. Utilization of sponge iron is being widely accepted as a means of strengthening the competitive power of Swedish specialty steels in the world market. The sponge iron produced by the Höganäs method also provides a suitable material for the production of iron powder.

Höganäs process.—Two large companies are at present producing sponge iron by the Höganäs process on an industrial scale, namely, Höganäs-Billesholms AB, and Oxelösunds Järnverks AB. An important advantage of the Höganäs process is that low-grade fuel can be used, such as coke breeze. The method was developed by Höganäs-Billesholms AB and has been described in detail in various technical trade papers.

Wiberg-Söderfors process.—The Wiberg-Söderfors process is in commercial operation at five plants in Sweden, all of which belong to leading producers of high-grade and special steels, namely, Uddeholms AB (at Persberg), SKF Hellefors Jernverk, SKF Hofors Bruk, Sandvikens Jernverks AB, and Söderfors Bruk (owned by Stora Kopparbergs Bergslags AB).

The Wiberg-Söderfors process has been developed with the aim of minimizing the consumption of high-grade imported fuels in steelmaking operations. At the present time, the Wiberg-Söderfors furnaces are operating on gas produced from coke in an electrically heated carburetor, but experiments are being conducted in the use of other fuels such as gaseous fuels.

The Wiberg-Söderfors process is based on principles devised by Professor Martin Wiberg and its development was pioneered by Stora Kopparbergs Bergslags AB, Sweden's largest steel producer.

Kalling-Domnarfvet sponge iron process.—This process is performed in a rotary furnace utilizing low-grade fuel having high thermal efficiency. Small-dimension ore is used. This process is especially suitable for the reduction of low-grade ore since the sponge iron produced may be readily crushed and magnetically concentrated. A pilot plant is in operation at Domnarfvets Jernverk (owned by Stora Kopparbergs Bergslags AB) but a full-sized plant will start production on a commercial scale in the immediate future.

Stelling process.—By this process finely crushed ore is reduced in a fluidized bed by means of gas consisting chiefly of carbon monoxide. This process, invented by Professor Stelling, is under development in a small pilot plant.

B. Oxygen converters

Kaldo process.—This process has derived its name from the inventor, Professor Bo Kalling, and Domnarfvets Jernverk, where the process was developed and where a 30-ton converter has been in continuous operation during the past eighteen months. This process is reported to have been very successful from the very start. The principal advantage claimed for the Kaldo process is that it is possible to produce a steel of the same quality—in some respects of higher quality—than that produced in an open hearth furnace from iron having varying phosphorus contents ranging up to two percent and, moreover, this can be done at a cost not higher than that of producing steel by the basic Bessemer process. The capital cost (cost of installation) for a Kaldo steel plant is reported to be considerably lower than that for an open hearth shop of equal capacity.

It is expected that the Swedish steel industry will utilize the Kaldo process on a very large scale. Plans to install such furnaces have already reached an advanced stage at several steel mills. The French steel industry has also decided to introduce the Kaldo process and is beginning with the installation of 2 100-ton converters, it is reported. It is noted that the expansion project of Oxelösunds Järnverks AB (owned by Trafik AB Grängesberg-Oxelösund) provides for the installation of 2 large Kaldo steel furnaces each taking a charge of 100 metric tons. This project is scheduled for completion by 1960.

The Kaldo process is said to have attracted a great deal of attention in major steel-producing countries, and people from those countries have recently been studying this process at the Domnarfvet steel mill.

Further details concerning the Kaldo process were given in the section on "Technological developments" of Embassy despatch No. 299, of September 13, 1957, entitled "Iron and Steel Production and Market Analysis—First Half 1957."

LD process.—Following a series of trials in which pure oxygen was top blown in an acid Bessemer converted, Fagersta Bruks AB (a leading maker of stainless and alloyed steels) has decided to adopt this technique at its mill at Fagersta. Fagersta Bruks AB will thus be the first steel company to use this method in acid converters.

C. Continuous casting

Since 1954 continuous casting (Junghans-Rossi) has been in commercial operation at Nyby Bruks AB for the production of stainless steel slabs (normal slab sizes: 285 mm. by 65 mm.; maximum width: 500 mm.). Operation is reported to be successful. The principal advantages are said to be considerably higher output, and elimination of the blooming mill for which the capital cost is said to be many times larger than that for the casting machinery.

D. Planetary mills

No such mill is in operation or on trial in Sweden.

For the Ambassador:

HARRIS R. HUNGERFORD,
Commercial Attaché.

Approved:

WILLIAM A. FOWLER,
Counsel of Embassy for Economic Affairs.

In view of time element, a copy of this despatch was sent by open air mail on October 22, 1957, to Mr. John S. Hoghland II, Acting Assistant Secretary for Congressional Relations, Department of State.

[Unclassified]

FOREIGN SERVICE DESPATCH

Air priority

COLUX D–49
OCTOBER 15, 1957

From: United States Representative, United States Mission to ECSC, Luxembourg.
To. The Department of State, Washington.
Pouched: Bonn, Duesseldorf, Geneva, London, Luxembourg, USRO Paris, Stockholm, Vienna.
Subject: New Technological Developments in Iron and Steel Production.
Reference: CA–3185.

The two attached documents may be useful to the Senate Subcommittee on Antitrust and Monopoly in its study of new technological developments in the steel industry.

Mr. J. E. Brassert, who is currently in Luxembourg on private business, offered the Mission the notes contained in the attached letter upon being informed of the Department's request. He is an American citizen and president of H. A. Brassert & Co., a firm of consulting engineers for the iron and steel industries. Mr. J. E. Brassert's father, Mr. H. A. Brassert, founded the Brassert Oxygen Technik Co. mentioned in the reference despatch. Mr. H. A. Brassert retired in 1951.

Mr. J. E. Brassert states that, among other things, he (J. E. Brassert) directed in 1952–54 the construction of the largest blast furnace on the European continent at the Westfalenhuette, A. G. Dortmund, W. Germany, and that he also has built a pilot plant in the United States for the production of steel directly from the ore by electrical methods.

W. WALTON BUTTERWORTH, *Ambassador.*

Enclosures:

1. Letter from Mr. J. E. Brassert.
2. Memorandum of conversation:
   Mr. Schneider, Industrial Problems Division, High Authority, and
   Mr. Wayne, United States Mission.

ENCLOSURE 1

H. A. BRASSERT & CO., INC.,
CONSULTING ENGINEERS FOR THE IRON AND STEEL INDUSTRIES,
New York 17, N. Y., October 14, 1957.

Subject: New technological developments in iron and steel production in Western Europe.

Mr. JULES H. WAYNE,
American Mission to the CECA, Luxembourg.

DEAR MR. WAYNE: I am in a position to give you information on some of the new iron and steel techniques that are presently being developed in Western Europe.

Oxygen converter

The most important of these in respect to the amount of investment being expended on new installations all over the world is the process for the conversion of pig iron to open-hearth quality steel in the oxygen converter. This permits the replacement of expensive and bulky open-hearth capacity with simple, efficient converting vessels, lanced with oxygen. The process has a limitation in regard to the amount of scrap that it can handle and, therefore, is suitable where pig iron is more readily available than scrap. The capital cost is around 60 percent of equivalent open-hearth capacity. One average-size converter can convert to steel the entire daily production of a 1,200 ton per day blast furnace, plus 30 percent of scrap. It would take a number of open-hearth furnaces of average size to accomplish the same result. Limitations in regard to the range of suitable pig-iron analysis are being overcome.

Oxygen converters are in full commercial production in Europe and America. The capacity will expand all over the world, gradually replacing open hearth capacity up to a point determined by the relative proportions of pig iron and scrap used for steel production. In countries where scrap is relatively scarce, in all of South and Central America, for instance, almost all new capacity will consist of oxygen converters. In the U. S. A. this proportion may run up to 50 percent.

The inventions and developments leading to the commercialization of the oxygen converter process were the products of the joint efforts and contributions of the Voest (at Linz, Austria), the Alpinmontangesellschaft (at Donawitz, Austria), Mannesmann, the von Roll'sche Eisenwerke, and various Brassert organizations. The locations of the first two companies gave rise to the name L–D process. The Brassert Oxygen Technik company is a small organization which helped to promote this joint cooperation of large European firms, and which held the original international licensing rights. I believe the results could not have been obtained so quickly, so effectively, and at so little cost without this type of cooperation.

While the above-mentioned group were the first to carry through the development and commercialization on a large scale, a number of other groups are now working on similar methods; these include the Kal-Do and the Rotor processes.

Acid blast furnace process

A second most important development appears to me to be that which has permitted blast furnaces to operate on very low-grade, acid, and sulfurous ores, without consuming so much coke as to make the operation uneconomical. In England and Germany these methods have made it possible to continue to base a reasonable percentage of pig iron and steel production on ores located within their home territories. If these countries had been forced to cover these ore supplies from overseas, they would have found it necessary to make very large investments in the development of foreign-ore basins, investments which would very likely have not been within their power without substantial help from the United States.

These investments would have to be made in countries where political changes might interrupt the supply of ore and the amortization of the investments and where their profitability would have been subject to all the fluctuations in the costs of international ocean shipment.

The acid blast furnace process is conducted in the conventional blast furnace, and its capital and operating costs are dependent on the same factors as those of the conventional process. It was first commercialized in 1934–39 at the Corby Works of Stewarts and Lloyds, the largest and most modern plant in England, under the engineering and supervision of H. A. Brassert & Co., Ltd., of London.

It was subsequently introduced into Germany by Brassert in the Herman Goering plant at Salzgitter. The process has continued to be substantially improved upon both at Salzgitter, at Corby, and elsewhere in Europe.

These methods are now of interest in the United States for companies which may be forced to develop ores of similar type.

The first commercialization of this process resulted from the cooperation of Stewarts and Lloyds, the largest British tube manufacturers, and H. A. Brassert & Co., Ltd.

Wiberg direct reduction process

This process is one of several which have been developed to a greater or less degree, to permit steel production to take place in the absence of coal or coking coal. The Wiberg process is adapted for use with gas produced from coke or from coal of coking or noncoking types, with natural gas and with synthetic refinery gas. It produces sponge iron, which like pig iron is an intermediate product in the production of steel. Unlike the various fluidizing processes presently being developed in America, it has been developed to the point at which it is being used commercially by the steel industry. I understand that present unit capacities in Sweden are 100 tons a day, and that a large new steel plant, based on this process, is being built at Oxelösund, Sweden.

I am not thoroughly familiar with the sources of the investments in this development. The capital cost in the Wiberg process naturally depends on the available gases, but will be substantially less than that of a blast furnace and coke plant, even where the comparison is not made in a comparable stage of the technology.

"Elektrokemisk" electric pig iron process with preheating

Although this process has not been in commercial operation as yet, it has been thoroughly piloted by the Elektrokemisk, S. A. of Oslo and is due soon to be in commercial production. While electricity is used for heating purposes, the reduction can be carried out with most types of noncoking coal, and does not require coke. Since electricity is becoming always cheaper in relation to coke, this process may be destined to become at least as important as any of the previous ones mentioned. Its importance economically lies in the reduction of the electric consumption from 2,200 to 2,400 kilowatt hours per ton (in the old process without preheating) to 1,200 to 1,500.

Capital costs, including electric power facilities, will be on the same order as those of a blast furnace-coke plant; where the electric power is already available, they will be much lower.

It is obvious that the steel producers in the United States have no reason to be satisfied with their results in the initiation of new processes for iron and steel production over the last 20 years. It would be entirely erroneous to conclude that this results from their size. On the contrary, only the larger and medium size companies or combinations of them today have the accumulated experience and facilities to pilot such processes and bring them to commercial production.

On the other hand, most citizens of the United States have been reluctant to see the Government enter the steel industry by undertaking the commercialization of new processes directly. This reluctance appears to me to be well founded; Government agencies at present have neither the facilities nor the structure needed to best qualify them for this task.

The Government agencies in the United States have set a pattern for the world through their cooperation with private industry by accumulating and disseminating technical and economic information and through the Bureau of Mines pilot-plant projects.

I do believe the true reason for the lack of initiative in this field in the steel industry is the fact that, in the United States, the proportion of technically trained men at the heads of steel corporations is one of the lowest in the world. Specifically, this proportion is far lower than in most European countries and in the U. S. S. R. As here used, the expression "technical training" refers to an "intensive" educational training in mathematics, chemistry, and metallurgy, accompanied by an "extensive," worldwide knowledge of the industry and its problems, structure and development as related to the general industrial and social problems of the time. Although it is technical, this knowledge is in principle opposed to specialization and departmentalization.

The relative absence of such training at the highest executive level appears to be borne out by the pattern followed in the commercialization of new processes in the United States steel industry. With monotonous regularity the majority of steel producers quickly retrace the steps of the one company which has dared

to take the lead in advertising or financing a new process. Rarely does the procession wait long enough for the accumulation of technical information. Carefully engineered proposals, on the other hand, gather dust for years, because executives have not the interest or initiative to base their decisions on the products of scientific evaluation alone. There are accordingly few tasks as difficult as to break the ground for new processes in the United States steel industry.

The above is the symptom of an insufficiency which can be overcome only when our executives are ready to accord to the products of knowledge the respect that they are accorded elsewhere in the world and when they become willing to grant to the pursuit of knowledge at least as much attention as is presently given to their volume of sales.

Very truly yours,

H. A. BRASSERT, & Co.
J. E. BRASSERT, *President.*

ENCLOSURE 2

MEMORANDUM OF CONVERSATION

Participants: Mr. Schneider, Director of the Industrial Problems Division, High Authority
Mr. Wayne, United States Mission

Date: October 9, 1957.

I visited Mr. Schneider with a view to eliciting information concerning new technological developments in steel production in Western Europe, as requested in CA–3185 from the Department. Mr. Schneider stated that most of the desired information was available to his office but that it was a very large order and would require a great deal of time and effort to put together in a complete form. Moreover, he was of the opinion that most of the information was also available in the United States from trade sources and in the United States Bureau of Mines. Mr. Schneider was himself to a large extent dependent on United States sources for information on developments. Mr. Schneider, however, offered within his limited time availability to give me a few brief notes concerning those developments which were of current interest at the High Authority and information on which might therefore not yet be available in the U. S.

A conference on these various new steel making processes will be held at Dusseldorf, Germany, by the Eisen-Heuttenag on October 23–24.

Direct reduction process

This process was of great interest to the High Authority because it provided a method of using natural gas in lieu of coke and also because the end product, sponge iron, could be used as a substitute for scrap. The High Authority is currently considering the request of the Societé Sidérurgique de l'Adour for High Authority financial assistance in building a fair-sized pilot plant using this process. The pilot plant would be on a larger scale than the one currently operating in Trenton, New Jersey and, if successful, would lead to the construction of a full scale commercial plant capable of producing 600,000 tons yearly. The company involved, the Société Sidérurgique de l'Adour, is rather small but is owned by large steel producing interests.

Oxygen converters

The interest in this process results from the better quality steel produced. The older system, the L–D process, utilizes non-phosphorus-containing pig iron. Two newer processes now under development, however, are capable of operating on high phosphorus pig iron. Two related systems of this latter type are the Kaldo process and the Rotor process. The Kaldo process is of Swedish origin and was developed by Mr. Kalling. Sollac, a large French steel company, has ordered a plant using the Kaldo process and expects to have it in operation within 1½ years. The Rotor process was developed in Oberhausen, Germany, and a plant of this type has been ordered by a German firm (Ilsede-Peine).

Continuous casting

This process can be used by smaller and more efficient mills and the cost per unit of the end product is lower. The Atlas plant of this type producing 60 cm width strips has been operating seemingly without difficulty in Canada. A plant, in Milan, Italy, however, producing 100 cm widths has gotten into some difficulty and has requested High Authority assistance. This plant is operated by a very small company and is using the Sendzimer process (American). The High Authority is now considering the extension of assistance to this firm because of its interest in the process involved.

Despatch No. 114
OCTOBER 17, 1957.

From: United States Resident Delegation and Consulate General, Geneva.
To: The Department of State, Washington.
Subject: New Technological Developments in Iron and Steel Production.

Enclosed in one copy only is the information which this office has received from the Economic Commission for Europe Secretariat with reference to the request from the Senate Subcommittee on Antitrust and Monopoly in the referenced instruction. In transmitting this information to this office the Secretariat commented as follows: "With more time this information could of course be further developed. Furthermore, this kind of exchange of information and experience could be developed still more fully on the basis of discussion between experts during or within the framework of our Steel Committee sessions. If there is any further way in which we can be of help, please let us know."

FRANKLIN C. GOWEN,
United States Representative to International Organizations and Consul General.

Enclosures:

1. Memorandum prepared by the ECE Secretariat on (a) direct reduction of iron; (b) oxygen converters; (c) continuous casting; (d) planetary mills.

2. Advance copy of U. S. S. R. article on "Continuous Casting of Steel" with attached tabulation of 31 applications of the process in various countries.

1. ECE MEMORANDUM

The United States Subcommittee on Antitrust and Monopoly, for the purpose of its hearings on the steel industry, has sought information on certain new technological developments in Europe. The techniques of particular interest which are discussed in this note are:

(*a*) Direct reduction of iron;
(*b*) Oxygen converters;
(*c*) Continuous casting;
(*d*) Planetary mills (hot rolled).

The more specific information sought under each heading is as follows:

(i) Are these techniques still at the development stage or are they in actual commercial operation;
(ii) If the latter, have they been reasonably successful so far;
(iii) What are their principal advantages over existing technology;
(iv) How far do their capital costs compare with those at an equivalent stage of existing technology;
(v) What are future anticipations with regard to the use of these new techniques;
(vi) Has their development and installation been pioneered by the industry's largest firms or by smaller enterprises?

In the following note each of the four processes is discussed in turn and, as far as possible, an attempt has been made to answer the specific questions posed.

(a) *Direct reduction of iron*

Several processes have been developed for the direct reduction of iron from iron ore. Leaving aside developments in the United States, particularly with regard to the H-iron process, a brief account of what is being done in Europe can be found in:

An article by Prof. Dürrer (Switzerland) in "Recent Developments and Trends in Iron and Steel Technology" (E/ECE/147);

"The Lubatti Process," in "Recent Advances in Steel Technology and Market Development, 1954" (E/ECE/204, pp. 14–16);

"Reduction of Iron Ores by Natural Gases," by A. Scortecci (Finsider Steel Works, Genoa, Italy) in "Advances in Steel Technology, 1955" (E/ECE/238, Vol. I, p. 88);

"The Use of Natural Gas in the Reduction of Iron Ores," by H. Galluser (Consulting Engineer, Ateliers des Charmilles, Geneva, Switzerland), (ibid., p. 99);

An article by a French authority to be published in the ECE Technological Review for 1956 (an advance copy of which is being sent under separate cover);

An article on the "Use in Electric Arc Furnaces of Sponge Iron Produced by the Wiberg Process," in the "Journal of Metals," February 1957.

In general these various techniques should be regarded as at the developmental rather than the commercial stage, and it is too soon to give any idea of their capital costs relative to existing technology. The most promising is probably the Wiberg process. This is operating at the rate of about 100,000 t./year and it is claimed, though this cannot be regarded as proved, that even at this scale of production costs are no more than in the smelting of pig iron in normal blast furnaces. Sponge iron by the Wiberg process can be regarded as good material for use in the production of high-quality steel in electric furnices. An additional advantage is the possibility of using natural gas or liquid oil instead of coke.

An attempt has been made to compare the relative costs of the Wiberg process with three examples of blast furnace practice, two American (one at 800 t./day and one at 400 t./day) and one Swedish (two furnaces operating at 200 t./day each), and also with the Tysland-Hole process for the electric smelting of pig iron. These figures show the Weeberg process in quite a good light, but the cost data are of a somewhat doubtful value. Nevertheless it can reasonably be argued that the European experiments in direct reduction are promising, particularly for countries poor in coking coal, such as in the Far East. By and large, they have been pioneered by the smaller companies.

(*b*) *Oxygen converters*

There are a variety of oxygen converter processes in use in Europe and there is now extensive literature. However, much of this is conveniently summarized in the ECE Technological Reviews and other recent published sources, notably:

An article dealing with both oxygen steam blowing and the Austrian L–D process, in "Some Important Developments during 1953 in Iron and Steel Technology" (E/ECE/171, pp. 10–15);

"Bottom-blown converters, the Turbo-hearth process and the L–D converter" in "Recent Advances in Steel Technology and Market Development, 1954" (E/ECE/204, pp. 27–30);

An article by Mr. Matuschka (Austria) on the L–D process, in "Advances in Steel Technology in 1955" (E/ECE/238, p. 159); (Vol. II);

"Basic Bessemer Conversion Processes" by P. Coheur (Belgium), dealing with bottom, top, and side blowing (ibid., Vol. I, p. 109);

The adoption of the L–D process in Western Germany and in particular its modification to refine pig iron rich in phosphorous—a variety of articles published recently in "Stahl und Eisen" (1957, Heft 19, pp. 1277–1308);

The West German rotor converter process at the Hüttenwerk Oberhausen works, "Metal Bulletin," No. 4230, 24 September 1957, pp. 15, 19, 22;

"The Swedish Kal-Do Process" by Prof. Bo Kalling, in "Recent Developments and Trends in Iron and Steel Technology" (E/ECE/147, pp. 15–18); see also "Journal of Metals," July 1957, pp. 972–975;

The use of oxygen in converters in the United Kingdom at the Abbey Melting Shop of the Steel Company of Wales, "Journal of Metals," February 1957.

Of the oxygen converter processes used in Europe the most developed so far would appear to be the Austrian L–D process, which has been introduced by the two leading Austrian iron and steel works at Linz and Donawitz in collaboration. The basic advantages of this process are: first, the possibility of using open-hearth quality pig iron; secondly, the possibility of producing open-hearth quality steel; thirdly, the low capital cost, nearly half that for an open-hearth furnace for the same output; and fourthly, the relative low production cost. The process has now been introduced not only in Austria but in Canada, Western Germany, India, Italy, Japan, the Netherlands, the United States of America and the USSR. The outputs obtained or envisaged approximate to outputs normally obtained at open-hearth works.

The rotor converter process, introduced at Oberhausen, Western Germany, is designed to produce 700 t./day, and a substantially similar process is being introduced at two South African works, each with an annual capacity of 500,000 to 600,000 tons of steel. It is too early to assess definitely this process but it appears to be very promising both technically and economically.

The Kal-Do process now appears to have developed beyond the experimental stage and a new steel melting shop is being built using this process at Oxelosund, with two 80-ton converters and an annual capacity of 475,000 tons of steel.

Apart from the processes already mentioned, oxygen is now widely used in Europe at normal basic converters refining high phosphorous pig iron. Three different processes are used: Oxygen-enriched air; blowing with a mixture of steam and oxygen; and blowing with a mixture of oxygen and carbon dioxide. These processes are widely used in Belgium, Luxembourg, Western Germany, and France. Virtually open-hearth quality steel is being obtained, at normal operating costs and with lower capital costs. It is claimed, for example, that the capital cost of installing an oxygen converter shop using a mixture of oxygen and steam or oxygen and carbon dioxide is approximately three-quarters of the cost of installing an open-hearth shop of the same production capacity. Opinion generally throughout the European iron and steel industry is that the use of oxygen will continue to develop steadily, particularly with the growing use of tonnage oxygen, but it is impossible at this stage to say which of the various processes used are the most satisfactory and economic. Development has on the whole been pioneered by the larger firms.

(*c*) *Continuous casting*

The ECE Technological Reviews already referred to have dealt briefly with continuous casting, and a comprehensive article by a U. S. S. R. specialist, dealing particularly with developments in the U. S. S. R. but also surveying comprehensively developments on a world scale, will appear in the next Technological Review. An advance copy of this article, without the diagrams, is attached.

Developments throughout the world are at various stages, from experimental to pilot and small industrial scale, as will be seen from the attached article. The maximum production capacity so far achieved is 50 to 70 tons of steel per hour. The article also brings out that there are a number of problems still to be solved before continuous casting can be regarded as fully launched on a production scale, but there seems little reason to doubt that the technique is established and will develop further at a fairly rapid rate. A further description of double strand installations in the U. S. S. R. can be found in "Stahl", 1956, Nos. 6 and 10. Continuous casting would appear to have been pioneered by both large and small firms.

(*d*) *Planetary mills (hot rolled)*

A brief account of this mill can be found in "Some Important Developments During 1953 in Iron and Steel Technology" (E/ECE/171, an article based on information supplied by F. Hall, Ductile Mills Ltd., Birmingham, May 1953). One or more mills of this type have also been installed in Italy and Canada. This process, which, so far as the United Kingdom at least is concerned, has been pioneered by a relatively small firm, must still be regarded as at an experimental stage. The main difficulties experienced have been purely mechanical. From a metallurgical point of view the planetary mill would appear to be effective and economically quite feasible.

---

2. RUSSIAN ARTICLE

(Translation from Technological Review of the U. S. S. R.)

Continuous casting of steel

Work on the continuous casting of steel continued in a number of countries during 1956, and some substantial successes were achieved.

Plants of various types are now working on the industrial scale in Austria, Canada, the Federal Republic of Germany, France, the German Democratic Republic, Hungary, Japan, Sweden, Switzerland, the Union of Soviet Socialist Republics, the United Kingdom, and the United States of America. Widespread experimental work is also being done.

A general survey of the present state of development of the continuous casting process in various countries is to be found in the attached table, which gives the essential details of existing experimental and industrial plants and also plants which, according to published sources, were under construction during 1956.

Nearly all plants are of the vertical type (fig. 1), with water-cooled copper or brass molds (380 millimeters to 2,000 millimeters high), rolls for withdrawing the casting, and gas torches for cutting it into standard lengths (with the ex-

ception of the plant at the Holtzer Works, where small castings of oval section are cut with shears during casting).

The experimental plant at the Beaver Falls Works in the United States of America (fig. 2) has been erected entirely above floor level on a special tower and is supplied with steel from a 7-ton electric arc furnace (which acts at the same time as the ladle) installed on the casting floor. The industrial plant at the Cail Works at Denain in France is also above floor level, but the metal is brought up from the melt shop to the casting floor in special ladles by an inclined elevator.

All other vertical plants are installed partly above and partly below floor level. In most cases the ladles with the liquid metal are brought to the plant by ordinary gantry cranes. The castings are raised from the casting pit to floor level by vertical or inclined elevators. Most of the plants produce round, square, or oval ingots of relatively small section from small ladles. At some plants steel is poured from a single ladle into 2 or 4 molds simultaneously to increase output.

These main trends in the development of continuous casting are attributable to the fact that most existing plants have been built at relatively small works where furnace capacity is limited and where there is a demand for small-section castings of various types of carbon and alloy steels.

This explains why a country like the United States of America, where the majority of steelworks are extremely large, is lagging behind West European countries in the industrial applications of continuous casting.

Only comparatively recently have plants been built for the continuous casting of larger square and rectangular ingots, for instance a 240 millimeter square billet (Cail works, France), a 200 by 240 millimeter billet (Mannesmann works, Federal Republic of Germany), and slabs of various sizes (e. g., 140 by 545 millimeters at the Atlas Steelworks in Canada) (fig. 3), enabling output to be increased by as much as from 12 to 27 tons per hour in a single strand, from ladles with capacities of up to 35 tons.

Continuous casting of steel in the Soviet Union

Experiments on the continuous casting of steel began in the Soviet Union before the Second World War (1938), but only after the war had ended was the method developed on an appreciable scale.

In 1956 there were already eight experimental, pilot, and industrial plants in operation. The main features of these plants are described in the table. Existing plants in the Soviet Union are designed for producing relatively large section castings, such as 200 millimeter, 250 millimeter and 270 millimeter square billets and 150 by 500 millimeter, 150 by 600 millimeter, and 175 by 420 millimeter slabs. This makes it possible to cast a large quantity of metal per unit of time and to use stoppered ladles of various capacities. Experiments have also been carried out on the production of medium-section and small-section castings, including some of circular section 100 to 280 millimeter in diameter.

The practice of pouring steel from the spout of "teapot" type ladles has been adopted only at the Kalinin steelworks, where the continuous casting plant is designed for producing bars of 40 and 60 millimeter diameter.

The high output achieved by a number of plants has made it possible to use the process for casting steel of grades which are in mass demand.

In the Soviet Union, various research organizations and plants have been carrying out work on the continuous casting of steel in four directions.

The process developed by the Central Iron & Steel Research Institute (TsNIIChM) has been introduced at three semicontinuous casting plants (1 experimental plant at the TsNIIChM (fig. 4), another at the Kirov Works in Leningrad and a pilot plant at the Red October Works in Stalingrad) and at 2 continuous casting plants (at the Novo-Tulsk and Krasnoye Sormovo Works).

These plants mainly produce rectangular-section castings (slabs). Experiments have shown that the rectangular section is best suited to continuous castings, both from the point of view of the quality of the casting produced and from that of output. Other countries, too, have since come to the same conclusion.

Continuous casting plants operating the TsNIIChM process have the following main features:

1. They are vertical:
2. The main part of the equipment is installed below floor level, with the casting floor alone rising aboveground. With this arrangement the ladle can be brought up to the machine by ordinary gantry cranes;
3. The steel is poured via a relatively large tundish through cups mounted on the base of the latter, the flow being regulated by a stopper;
4. Water-cooled copper moulds consisting of four separate sides are used for casting slabs and billets. The moulds are 1,500 millimeters high;
5. The level of the liquid metal in the moulds is constant throughout the casting process;
6. There is an automatic device for lubricating the walls of the mould with paraffin or oil;
7. There is a special water roller-spraying high-pressure system for secondary cooling over the entire length of the mould down to the lower boundary of the liquid phase.

The experimental plant for semicontinuous casting of 150- by 600-millimeter and 175- by 300-millimeter slabs of stainless chrome-nickel steel alloyed with titanium was built at the Red October Works in 1951 (fig. 5). The plant consists of two machines with a worm gear for withdrawing the ingot, and is capable of producing ingots up to 7 meters long. The casting rate for 150- by 600-millimeter slabs of Cr-Ni-Ti steel (1:18:9) is 1,000 to 1,200 millimeters per minute. The slabs are used for making hot-rolled and cold-rolled sheet.

The pilot continuous casting plant at the Novo-Tulsk Works was built at the end of 1953, and is designed to produce castings up to 200 millimeters thick and up to 600 millimeters wide.

Until recently this plant was producing in a single strand 150- by 500-millimeter slabs mainly of low carbon dead-killed steel, but also of rimming low-alloy and transformer steels. The casting rate for slabs of this type is about 800 millimeters per minute. The ladle has a capacity of 10 tons, and pours for 20 to 25 minutes. A casting rate of 1 meter per minute was possible, and in which case the capacity of the plant rose to 35 tons per hour.

This year the Novo-Tulsk plant has been rebuilt to produce 200-millimeter square billets in 2 strands on a single machine. The actual rate of casting has now been brought up to 1 meter per minute, output being 35 tons per hour.

The industrial continuous casting plant at the Krasnoye Sormovo Works began operation early in 1955 (fig. 7). The plant is designed for producing two 175- by 420-millimeter slabs simultaneously. These are intended for manufacturing sheet and mixed section steels.

The steel is poured from 50-ton ladles via a 3.5-ton tundish, from which it is distributed simultaneously through 2 stoppers into 2 different moulds. The casting rate for 175- by 420-millimeter slabs of low-carbon steel is 800 to 1,000 millimeters per minute, and output with 2 strand working is from 55 to 70 tons per hour. Another two-strand plant is to be built at the same works which should make it possible to run the open-hearth shop exclusively on continuous casting.

Thus, the actual output of plants is such that single-strand plants may be used for casting slabs of the above dimensions in melt shops where ladle capacity is up to 35 tons, and 2-strand plants where ladle capacity is up to 70 tons.

Large-scale tests have been carried out on these experimental, pilot and industrial plants to study crystallization and heat exchange in the continuous casting process and the quality of the ingots produced and the rolled steel made from them.

Radioisotopes have been used to determine the depth of the liquid phase and the crystallization rate for castings of various sections and for various types of steel and casting speeds. It has been discovered, for instance, that the depth of the liquid phase (H) is determined by the following equations:

$H=6.7 \cdot v$ for 150×500 millimeter slabs, and

$H=9.5 \cdot v$ for 200 millimeter square billets,

where "v" is the casting rate.

Some knowledge of crystallization and heat exchange (in the mould and secondary cooling zone) is essential both for planning new plant and ancillary equipment and for developing methods of casting steel of new types and of new sections.

In round castings and billets produced by continuous casting, there is some tendency for central porosity to develop. It has been found, however, that in 200-millimeter and 300-millimeter square billets and 280-millimeter round castings there is no more central porosity than in ordinary ingots (fig. 8). Further, the chemical composition of the casting is uniform both horizontally and vertically (fig. 9). It has also been established that the occurrence of central porosity does not prevent continuous casting being used for round and square bars of carbon steel, since the porosity is eliminated during forging and rolling even after a relatively small reduction (3 or 4 : 1).

In continuously cast rectangular slabs, whose shape is particularly favorable for crystalization and for feeding the zones of solidification, the tendency to central porosity is appreciably less (fig. 10) than in round and square castings.

An increase in the intensity of cooling during continuous casting tends to inhibit the development of central porosity in slabs. On the other hand, overintensive cooling (more than 1 liter of water per kilogram of steel) tends to cause internal flaws. Experiments have shown that the tendency to internal flaws is less marked in the case of sustenitic steels, such as chrome-nickel stainless steels and low-alloy structurals, than in carbon steels. The pipe in slabs of continuously cast dead-killed steel is concentrated in the extreme upper end, and does not go very deep (not more than 100 to 150 millimeters) (fig. 11).

In 1956 a new technique was developed for the continuous casting of rimming steel. The thickness of the sound outer skin (free of blowholes) in 150- by 500-millimeter slabs was as much as 15 to 20 millimeters (fig. 12). The depth to which the blowholes extend their size and the number of blowholes below the skin depend on the smelting process and the conditions of pouring and crystalization. For slabs of carbon and low-alloy steels a casting rate of 0.6 to 0.8 meters per minute gave a completely satisfactory surface; higher rates are required for this purpose in the case of stainless steel alloyed with titanium.

In the second continuous casting process used in the Soviet Union the castings are formed continuously in a stationary water-cooled mold which is fixed at an angle of 30° to 40° to the horizontal. While the amount of metal entering the mold is kept constant, the rate of stripping is varied from time to time, so that the level of metal in the mold rises and falls periodically. This makes it possible to control the process and to lubricate the walls of the mold during casting.

A pilot plant working on this principle has been in operation at one engineering works since 1951. It is used for casting open-hearth carbon and low-alloy structurals in 250-millimeter square billets at a rate of about 400 millimeters per minute.

The third continuous casting process developed in the U. S. S. R. has the following main features. After one mold has been filled with metal up to the appropriate level, the stream of metal is cut off, and the casting forming in the mold is kept there for a certain time during which a fairly firm skin is formed on the periphery, without the skin on the surface of the metal being excessively chilled.

At the end of the predetermined period the walls of the mold open up and allow the casting to fall until only its upper end remains in the mold. The walls of the mold then close again, and the mold is ready for the next pouring.

After the metal has been poured into the first mold and the stream has been cut off, the tundish moves over to the second mold. After that has been filled the cycle is repeated.

A pilot plant working on this principle has been in operation since 1951. It is used for producing structural carbon and alloy steels and open-hearth tool and electric steels in mixed and sheet castings with sections of 270 by 270 millimeters and 220 by 1,000 millimeters.

In the fourth continuous castings process developed in the Soviet Union, the walls of the mold and the casting in process of formation move together, there being no relative motion between the two. A plant embodying this process was built at the Hammer and Sickle works in 1950 (fig. 15). It consists of 2 moving chain conveyors, 1 above the other. The steel halfmolds on the lower conveyor occlude with those on the upper conveyor to form a single channel 9 meters long, the mold of the required shape. The machine is arranged so that the axis of the channel is inclined at 10° to the horizontal. The metal enters the mold (channel) from a stoppered ladle via a tundish. The machine has all the shortcomings inherent in plants built on a slope. On the other hand, high rates of casting have been achieved with it, up to 5 meters per minute for 140-millimeter square billets.

In the use of the continuous casting process with large ladles, the following serious problems have still to be solved:

1. How to produce the castings required by modern rolling mills (for example, slabs less than 150 millimeters thick and up to 1,500 millimeters wide;
2. How to raise capacity by building multistrand plants and increasing casting rates;
3. How to produce castings of different sections on the same machine, by a quick change of molds and other equipment;
4. How to increase the mechanization and automation of plants and thus reduce the amount of labor required (particularly on multistrand machines); how to reduce the capital cost of the machines.

Description of continuous casting plants

Location	Operating since—	Type	Description	Number of strands
1. Austria: Breitenfeld.	1953	Pilot, vertical	Height, 10 meters (4.75 above floor level and 5.2 meters in pit). Steel poured from "teapot" type ladles. Stationary mold, height 7 meters. Castings cut by hand shears.	2
2. Austria: Gebr. Böhler Steel Works, Kapfenborg.	1952	do	Height, 12.5 meters, 8 meters of which below floor level. Steel poured from "teapot" type ladles via inclined through. Stationary mold, height, 6 meters.	2
3. United Kingdom: Barrow Steel Works, Barrow.	1952	Industrial, Junghans-Rossi process, vertical.	Details not available. Metal poured via tundish with measuring cup. Height of mold, about 5 meters.	1
4. United Kingdom: William Jessop Works, Sheffield.	1954	Pilot, BISRA process, vertical.	No details available. Spring-mounted mold. Metal poured via oscillating trough, which distributes the metal between 2 molds.	2
5. United Kingdom: Sheffield.	1955	Experimental, BISRA process, vertical.	No details available. Spring-mounted mold.	1
6. United Kingdom: Low Moor Alloy Steel Works, Bradford.	Work started in 1946.	Experimental, vertical.		1
7. Argentina: Buenos Aires.	Under construction.	Industrial, Junghans-Rossi process, vertical.		2
8. Hungary	1956	Experimental	Height 20.5 meters, of which 10 meters above floor-level. Stationary vertical mold, height 1,000 mm. Metal poured through stopper.	
9. German Democratic Republic: Dehlen Works.		Experimental, vertical.	Semicontinuous. Reciprocating mold, height 1,260 mm. Length of ingots cast, 6 to 6.5 meters.	3
10. Italy: Udine Works.	Under construction.	Industrial, vertical.		1
11. Canada: Atlas Steel Works, Welland.	1953	Industrial, Junghans-Rossi process, vertical.	Height 16.6 meters, of which 7.3 meters below floor level. Cast copper reciprocating mold, height 600 mm. Secondary cooling by sprays. Automatic cutting with 2 gas cutters. Metal poured from lip of 35-ton ladle, via tundish fitted with a slag-dam and base cup. Protective atmosphere-propane.	1
12. U. S. S. R.: Central Iron & Steel Research Institute (TsNIIChM), Moscow.	1949	Experimental, for semicontinuous casting, vertical, TaNIIChM process.	Plant with cable drive to produce ingots of various shapes and sections up to a length of 3.5 to 4 meters. Overall height 6.5 meters (3 meters above floor level). Stationary mold with water-cooled copper walls, height 1,400 mm. Metal poured from ladle fitted with stopper. Prelubrication of inside of mold. Controlled secondary cooling with water.	1
13. U. S. S. R.: "Red October" Works, Stalingrad.	1951	Pilot, for semicontinuous casting, vertical, TsNIIChM process.	Plant consists of 2 separate machines with worm drive, and produces ingots up to 7 meters long. Overall height 10.3 meters (2.7 meters above floor level). Reciprocating mold with water-cooled copper walls. Height 1,500 mm. Metal poured from a stoppered ladle via tundish (also stoppered) with a capacity of 350 kg. Metal is poured into each machine alternatingly. Intensive secondary cooling by water jets. Ingots are removed from machine by gantry crane.	
14. U. S. S. R.: Kirov Works, Leningrad.	1953	Experimental for semicontinuous casting, vertical, TsNIIChM process.	Details similar to that of plant at "Red October" Works. Also consists of 2 separate machines. Metal is poured first into one and then into the other.	

Description of continuous casting plants—Continued

Rate of casting or output (designed and actual)	Description of furnaces supplying metal, and type of ladle	Types of steel cast	Shape and size of castings
Output about 8 tons per hour; rate of casting 0.5 to 1.0 meters per minute.	4- and 10-ton electric furnaces.	Carbon and low-alloy steels.	Round, 110- and 130-mm. diameter. Slabs 65 by 275 mm.
0.5 to 1.0 meters per minute.	7-ton electric furnace.	Alloy steels, including stainless and high-speed steels.	Square, 110- and 120-mm. section. Round, 120-mm. diameter. Slabs, 460 mm. wide.
Actual rate of casting, 6 to 12 meters per minute.	5-ton electric arc furnace.	Carbon steels	Square, 5-mm. section.
Actual rate of casting 0.76 meters per minute.	1.5-ton electric furnace.	High-speed stainless and other steels.	Square, 100 mm. section.
		Low-alloy steels	Round, 10 mm. diameter. Square, 10 mm. section. Slabs, 65 x 230 mm.
Actual rate 0.6 to 1.5 meters per minute depending on type of steel and section.		All types of high-alloy steel.	Round, 65 to 115 mm. diameter. Square, 100 and 120 mm. section. Slabs, 75 x 350 mm.
		Carbon steel	Square, 75 and 100 mm. section.
1.2 meters per minute	8-ton electric furnace, 2.5-ton ladle.	Carbon steels	Round, 150 mm. diameter.
Actual rate 1 to 1.5 meters per minute.	5-ton electric furnace.	Carbon and alloy steels.	Round, 130 mm. diameter. Square, 130 mm. section.
		Carbon steels	Square, 125 mm. section. Square, 175 mm. section.
Actual output 24 to 27 tons per hour. Rate of casting 1 to 1.9 meters per minute.	35-ton electric furnace.	Mainly stainless steels.	Slabs 140 x 545 mm., and 140 x 190 mm.
Rate of casting 0.5 to 1.2 meters per minute, depending on shape and section of ingot.	1.5-ton electric arc furnace.	Low- and high-alloy steels and carbon steels.	Rectangular, sections up to 150 x 600 mm. Square, up to 300 mm. section. Round, up to 280 mm. diameter.
Rate of casting 1 to 1.2 meters per minute.	20-ton electric arc furnace.	Stainless steel	Rectangular (slabs), up to 180 x 500 mm. section.
Rate of casting 0.6 to 1.2 meters per minute.	5-ton electric arc furnace.	Carbon steels	Round, 200 mm. diameter. Square, 200 to 300 mm. section. Slabs, 150 x 500 mm.

Description of continuous casting plants—Continued

Location	Operating since—	Type	Description	Number of strands
15. U. S. S. R.: Novo-Tulsk works, Tula.	1953	Pilot for continuous casting, vertical, TsNIICnM process.	Overall height 22 meters (3 meters above and 19 meters below floor level). The casting is withdrawn by pinch rolls mounted in 2 stands (at the 3-meter and 8-meter marks), 2 pairs of rolls per stand. Reciprocating mold with water-cooled copper walls, 1,500 mm. high, with automatic lubrication. Metal is poured from stoppered ladle via a 1.5-ton tundish. Flow of metal from tundish is controlled by stopper. Controlled high-pressure roller-spray secondary cooling, with water. Casting is cut into uniform lengths by an oxyacetylene burner during casting. Castings are moved from the pit to the storage point by vertical elevator. Cutting of castings and their removal from pit to stockyard are automatic.	1
16. U. S. S. R.: "Krusnoye Sormovo" Works, Gorky.	1955	Industrial, for continuous casting, vertical, TsNIIChm process.	Overall height 16.8 meters (3.8 meters above floor level and 13 meters below). Plant consists of 2 machines, each with its own mold (stationary, with water-cooled copper walls, 1.500 mm. high). There is an independent drive for each machine (2 pairs of pincer rolls in 1 stand per machine). Metal is poured from stoppered ladle via trindish (capacity 3.5 tons), which distributes the metal between the 2 molds through stoppered and electrically heated base cups. Controlled high-pressure roller-spray secondary cooling with water. Ingots are cut into uniform lengths during casting by oxy-acetylene torch. Castings are moved from the pit to storage point by a pendulum-type tipper and inclined conveyor. Cutting of castings and their removal from pit to storage point are automatically controlled.	2
17. U. S. S. R.: Engineering Works, Gorky.	1951	Pilot, for continuous casting, stationary inclined mold.	Plant covers an area of 30 x 4 meters. Its top reaches a height of 3.6 meters above floor level and its base 3.5 meters below. Water-cooled mold (2.000 mm. long) with copper walls, set at an angle of 30° to 40° to the horizontal. Metal is poured from stoppered ladle via a trindish (capacity 250 kg.) fitted with a "trunk." Metal enters mold at constant speed, but the stripping rate is changed periodically, so that level of metal in mold fluctuates (to facilitate control and lubrication). Secondary cooling of casting by water sprays. Casting is moved first by track drive, then diverted onto horizontal run-out roller track. It is cut into pieces of uniform length by gas torch.	1

Description of continuous casting plants—Continued

Rate of casting or output (designed and actual)	Description of furnaces supplying metal, and type of ladle	Types of steel cast	Shape and size of castings
Rate of casting up to 1 meter per minute. Output up to 35 tons per hour.	10-ton open-hearth furnace, 10-ton oxygen-blown converter, 5-ton electric arc furnace.	Dead-killed and rimming carbon low-alloy steels.	Rectangular (slab), 150 x 500 mm. section. Square 200 mm. section.
0.8 to 1 meter per minute. Output with 2 strands working 55 to 70 tons per hour.	----------	Carbon steels----------	Rectangular (slab), 175 x 420 mm.
Output 21 to 27 tons per hour.	Capacity of ladle, 20 tons.	Structurals, medium—carbon and low-alloy steels.	Square, 250 mm. section.

Description of continuous casting plants—Continued

Location	Operating since—	Type	Description	Number of strands
18. U. S. S. R.: Engineering Works, Izhevsk.	1950	Pilot vertical, "intermittent growth" system.	Plant is fitted with 2 vertical water-cooled molds with copper walls (2,000 mm. high) which open up periodically. Metal is poured from stoppered ladle via trundish (where flow of metal is controlled by the stopper) first into one and then into the other mold by rotating the tundish. After the first mold has been filled with metal and left to stand for the specified period, it opens up and drops the casting so that its top remains inside the mold. While metal is being held in the first mold, metal is poured into the second. Then the first is filled again and the cycle is repeated. The ingot is withdrawn by pinch rolls. Secondary cooling by water-cooled metal cells. After the ingot has solidified, it is cut into even lengths by gas torch.	2
19. U. S. S. R.: "Hammer and Sickle" Works, Moscow.	1950	Pilot, for continuous casting, mold mobile and inclined.	The plant consists of 2 moving conveyors with half-molds which occlude to form a channel at an angle of 10° to the horizontal. Length of channel about 9 meters. Metal is poured from stoppered ladle into tundish (capacity 1 ton) and then along a Pined "trunk" (2 meters long) into upper end of the channel (mold). On leaving the channel the ingot moves down an inclined trough and along a horizontal run-out roller track (where it is cooled by water sprays) and is cut into 10-meter lengths by gas torch.	1
20. U. S. S. R.: "First of May" Works, Kalinin.	1956	Industrial, for continuous casting, vertical.	Height 5.3 meters (including 3.3 meters below floor level). Metal is poured from a "teapot" type ladle via funnel. Reciprocating mold (3-stroke cycle, 600 mm. high). Ingot cut by gas torch. Castings are raised to floor level on an inclined conveyor.	1
21. United States: Babcock and Wilcox Works, Beaver Falls.	1946	Experimental, Babcock and Wilcox process, vertical.	Plant installed on a tower 23 meters high. Stationary brass mold. Automatic control of level of metal in mold. Height of mold 2,000 mm. Cutting by gas torch. Secondary cooling by water or air depending on type of steel and shape of casting. Metal poured from lip of tundish. Protective atmosphere—argon.	1
22. United States: Allegheny Ludlum Steel Corp., Watervliet.	1947	Experimental Junghans-Rossi process, vertical.	Cast copper reciprocating mold 380 mm. high. Secondary cooling with water. Castings cut by hand gas cutter. Metal poured from lip of transfer ladle (induction heating) into stoppered tundish, and thence into mold. Protective atmosphere—propane. Mold lubricated with vegetable oils.	1
23. Federal Republic of Germany: Mannesmann-Hüttenwerke, Hückingan.	1950	Experimental Junghans process, vertical.	Height 16.5 meters (6 meters below floor level). Reciprocating mold.	1
24. Federal Republic of Germany: Mannesmann-Hüttenwerke, Hückingan.	1954	Industrial, Junghans process, vertical.	Metal poured from stoppered ladle via tundish. Height of mold 1,000 mm.	4
25. Federal Republic of Germany: Rheinische Rohanwerke. Mülheim.	1952	Vertical	No details available. Metal poured from stoppered ladle.	2

Description of continuous casting plants—Continued

Rate of casting or output (designed and actual)	Description of furnaces supplying metal, and type of ladle	Types of steel cast	Shape and size of castings
Output 24 to 48 tons per hour.	Capacity of ladle, 17 tons.	Carbon tool steels.....	Square, 270 mm. section.
Rate 3.5 to 5 meters per minute. Output, 24 to 36 tons per hour.	10-ton open-hearth furnace.	Dead-killed low-carbon steels.	Square, 140 mm. section.
Designed casting rate up to 5.5 meters per minute.	Capacity of ladle, 1.5 tons.	Carbon steels.....	Round, 40 and 60 mm. diameter.
Actual output 24 tons per hour.	5- to 7-ton electric arc furnace.	Carbon, low-alloy and stainless steels.	Oval, 115 x 225 mm. Square, 150 and 175 mm. section. Rectangular 75 x 375 mm.
Actual output 10 to 15 tons per hour.	3-ton high-frequency or arc furnace.	Carbon and many types of alloy steels, including stainless steels.	Slabs, 75 x 375 mm. Square, 90 mm. section. Round, 137 mm. diameter. Round, 225 mm. dia.
Actual output 10 tons per hour.	Capacity of ladle 7 to 8 tons.	Low-alloy steels for tubes.	Round, 130 mm. diameter. Rectangular, 140 x 180 mm.
Designed output 48 tons per hour.	-----	Low-alloy steels electric.	Rectangular, 200 x 240 mm.
Actual output 12 tons per hour.	-----	-----	-----

Description of continuous casting plants—Continued

Location	Operating since—	Type	Description	Number of strands
26. France: Societé des hauts-fourneaux et forges, Allevard.	Under construction.	Industrial, vertical		1
27. France: Cail Works, Denain.	1953	do	Height above floor level 17 meters. Metal is brought up to casting floor on an inclined elevator. "Teapot" type ladle. Metal is poured from lip of ladle via a trough system into 4 stationary molds, each 1,000 mm. high.	4
28. France: Jacob Heltzer Workers, Unioux.	1953	do	Plant is installed partly above and partly below floor level. Metal is poured from lip of high-frequency furnace via a tundish with a base cup into a 680 mm. high mold with chrome-steel walls. Secondary cooling by water. Castings cut during casting with shears.	2
29. Switzerland: Lucerne Steel Works.	Under construction.	Industrial, horizontal.		1
30. Sweden: Nyby Bruks Works.	1954	Industrial, Junghans-Rossi process, vertical.	Height 18 m. (part above and part below floor level). Reciprocating mold.	1
31. Japan: Osaka Works.	Under construction.	Industrial, Junghans-Rossi system, vertical.		1

Economic Aspects of the Oxygen Converter Process

By W. C. Rueckel, Vice President, Kaiser Engineers; J. W. Irvin, Associate Engineer, Kaiser Engineers

(Presented at the A. I. S. E. Meeting in Cleveland, Ohio, September 28, 29, 30 and October 1, 1954)

In normal manufacturing operations, several questions arise concerning new processes, new developments and new techniques. These questions deal with the economics of the process, with the technology of the process, and with the quality of the product in its effect on product marketability. From the standpoint of the oxygen converter, the latter two questions have been answered in recent trade journals and need no elaboration here. It is the purpose of this paper to investigate the comparative economics of the oxygen converter process. Briefly, the history and development of oxygen converted steel is as follows:

The economic and thermodynamic advantages of pneumatic conversion have been known since the advent of the Bessemer converter. However, the product from the Bessemer converter is limited in its use because of its properties as affected by the higher content of gases and metalloids as compared to open hearth product. To eliminate these difficulties and retain the advantages of pneumatic conversion, the oxygen converter was developed in Europe reaching the commercial stage within the last few years. This process required more than fifteen years in transition from laboratory experiments through various size pilot plants to the size and scope as we know it today.

At the present time (1954) there are three operating plants on the European continent and several in construction on this continent.

Since the open hearth shop accounts for about 90 percent of the ingot production in this country, it will be used as a standard for cost comparison. In addition, the quality of oxygen converter steel is comparable to the finest product of the open hearth furnace.

In the March 1954 issue of the Iron and Steel Engineer, a paper entitled "Cost Comparisons of the Open Hearth and Electric Furnace" was presented by David D. Moore. Part of the figures presented today are correlated to Mr. Moore's data so that general comparison can be made. It should be recognized that such

Description of continuous casting plants—Continued

Rate of casting or output (designed and actual)	Description of furnaces supplying metal, and type of ladle	Types of steel cast	Shape and size of castings
----------	----------	Carbon steels	Square, 75-mm. section. Rectangular, 75 x 125 mm.
Designed casting rate 0.45 per minute. Actual output 50 tons per hour.	25-ton electric furnace overloaded to 33 tons.	----------	Square, 240 mm.
Actual casting rate 0.6 to 0.9 meters per minute. Output 25 tons per day.	1.5-ton high-frequency furnace.	All standard types of alloy and special steels.	Oval, 88 x 105 mm. (1 strand working). Oval, 60 x 80 mm. (2 strands working).
----------	----------	Carbon steel	Square, 75 mm. section. Square, 100 mm. section.
Designed casting rate 4.5 meters per minute.	----------	Carbon and alloy steels.	Square, 88 mm. section. Round, 150 mm. diameter. Slabs, 63 x 375 mm. section.
----------	----------	do	Slabs, 75 x 375 mm. section. Square, 50 to 200 mm. section. Round, 50 to 200 mm. diameter.

topics as Cost of Metallics and Cost Above are controversial. However, each of you undoubtedly has a measure of comparison in your own cost figures. The construction costs are also subject to some degree of latitude, depending upon the specific items covered by the estimate, but since both sets of cost figures have the same basis, a factor of proportionality can be established.

The production cycle of a 35-ton oxygen converter is about 40 minutes; made up of 20 minutes blowing and 20 minutes idle. The idle time is consumed in skimming, testing, pouring, and charging. Thus, the production rate of an oxygen converter is 52 tons per hour or 450,000 tons per year. The addition of a second converter could be installed having its production cycle staggered so that it would be blowing while the first converter was idle. This procedure would double the capacity of the plant without materially increasing the size or quantity of auxiliary equipment, other than the oxygen plant. Correspondingly, the production rate of a modern open-hearth furnace using hot metal is about 21 tons per hour. On the basis of 90 percent furnace availability, the net production rate is 18 tons per hour or 160,000 tons per year. Clearly then, 1 oxygen converter has about the same production capacity as 3 open-hearth furnaces. The economic study will be based on 2 plant capacities of 500,000 and 1,000,000 annual tons corresponding to 1 or 2 converter vessels, and then to 3 or 6 open-hearth furnaces.

Table I shows the estimated construction costs for oxygen-converter shops and open-hearth shops of approximately 500,000 annual tons and 1,000,000 annual tons. "Buildings" include the open hearth building, stockhouse, teeming building, etc. "Equipment includes furnaces, vessels, ladles, buckets, molds, stools, charging machine(s), cranes, mixer(s), etc. The open hearths chosen for this particular study was 275-ton capacity. The oxygen converter vessels chosen were two 35-ton capacity (1 operating and 1 standby) and three 35-ton capacity (2 operating in sequence and 1 standby). "Utilities" includes water piping, steam piping, electrical distribution system, wiring and, for the oxygen converter, an oxygen plant of suitable capacity. "Air pollution" includes waste heat boilers, filtration equipment, duct work, sludge piping, etc. "Storage facilities" include trackage, scrap yard, slag disposal, flux storage, etc.

The actual installed cost of a conversion shop is widely variable depending not only on the type and design of the equipment, but on the restrictions im-

posed by the particular plant site. Therefore, the figures below may vary from an actual installation cost, but the relative proportions will remain essentially the same. The wide variations in cost for an oxygen converter shop and an open hearth shop lie principally in buildings and in equipment. In view of the small size of the oxygen converter as compared to the open hearth, less building area is required. In addition, lighter live loads and dead loads result in less expensive columns, beams, and floors, reducing the cost per unit area. The equipment costs are lower for an oxygen converter shop not only because of the lower cost of the vessel as compared to three open-hearth furnaces, but also because of the lighter cranes and other auxiliary equipment. The reason for the smaller rate of increase for the oxygen converter shop as the capacity increases from 500,000 to 1,000,000 tons per year is due to the fact that at the lower capacity, virtually 100 percent standby equipment is required. With the increase in capacity, virtually all funds are allocated to productive equipment. This margin does not appear for the open hearth.

TABLE I

	450,000-ton annual capacity oxygen converter	525,000-ton annual capacity open hearth	900,000-ton annual capacity oxygen converter	1,050,000-ton annual capacity open hearth
1. Buildings	$900,000.00	$5,700,000.00	$1,200,000.00	$9,300,000.00
2. Equipment	1,900,000.00	10,000,000.00	2,400,000.00	19,200,000.00
3. Utilities	2,600,000.00	1,600,000.00	3,400,000.00	1,900,000.00
4. Air pollution control	1,500,000.00	1,500,000.00	2,000,000.00	3,000,000.00
5. Storage facilities	2,200,000.00	2,000,000.00	2,400,000.00	2,000,000.00
Total	9,100,000.00	20,800,000.00	11,400,000.00	35,400,000.00
Cost per annual ton	20.22	39.61	12.67	33.71

Table II shows the burden and materials cost per ton of tapped steel for the oxygen converter process and for the open-hearth furnace. For comparison purposes, the hot metal ratio of the open-hearth furnace has been increased to the same rate as the oxygen converter (78 percent although this ratio is higher than used in normal practice. In view of the fact that at this time hot metal is lower in cost than scrap, the increase in hot metal operates to the advantage of the open hearth. The calculations from which these data are taken are based on the principles of thermochemistry given in Basic Open Hearth Steelmaking (1), Metallurgical Problems (2), and Fuel Flue Gases (3).

The materials cost per ton of tapped steel shows a cost advantage of only 74 cents per ton for the open-hearth furnace. The principle factor in this cost advantage is from the metallic iron reduced from the ore. This was obtained at an equivalent cost of about $20 per net ton of iron. This apparent advantage is offset by fuel required to reduce the ore to metallic iron and these costs appear in "Cost above." If the conventional hot metal ratio of 60 percent were used, the materials cost for an open-hearth furnace would be about $37.50 per ton or an increase of 83 cents per ton over the higher hot-metal ratio. At 50 percent hot metal in the open-hearth furnace, the materials cost would be $38.18 per ton. As might be expected then, on the same basis, the materials costs for the 2 processes are relatively close together (within 2 percent).

TABLE II

	Oxygen converter		Open hearth	
	Pounds per ton of steel	Cost	Pounds per ton of steel	Cost
Steel scrap at $43 per gross ton	475	$9.03	438	$8.32
Hot metal at $33 per net ton	1,650	27.23	1,465	24.17
Iron ore at $14 per gross ton			380	2.38
Deoxidizers		.75		1.20
Scale		.40		.60
Total		37.41		36.67

Table III shows the cost above per ton of steel for the oxygen-converter process and for the open-hearth furnace. As the oxygen converter requires no external source of heat, one of the major savings in cost is fuel. The fuel cost, per ton of steel, does not change with increased shop capacity and is affected only by the heat requirement of the open-hearth process, which is about 3.3 million B. t. u. per ton. If the oxygen required for the oxygen converter is deducted, the net fuel cost of the open-hearth furnace is $1.18 higher than for the oxygen converter. The cost of fluxes is considerably higher for the oxygen converter because it becomes advantageous to use principally burnt materials such as burnt lime instead of the raw stone. Part of the fuel costs shown above are dependent upon the calcination of the $CaCO_3$. Furnace refractories and furnace repair are less for an oxygen converter for several reasons. From the standpoint of durability, the lining life of existing oxygen converters is about 230 heats or about 8,000 tons. Present practice is to recover as much of the lining as possible for reuse in tar-pressed bricks and tamping clay. The net consumption of refractories is 30 pounds per ton for the oxygen converter, as compared to 80 pounds per ton in an open-hearth furnace (4). It is assumed that the masonry labor will be directly proportional to the quantity of refractory. Production labor, developed from comparative force reports, shows that the labor cost of an oxygen-converter shop is about half of that of an open-hearth furnace shop. In view of the simplicity of the oxygen converter, maintenance labor, and materials, supplies, tools, and lubricants will also be about 60 percent of the cost of an open-hearth installation. The quantity of oxygen required for conversion is 0.08 ton per ton of steel, and since oxygen can be produced for about $10 per ton in the quantity required (5), the cost of oxygen will be $0.80 per ton of steel. To that must be added the cost of oxygen for the remainder of shop uses ($0.20 per ton) giving a total cost of $1 per ton. Employee benefits are related to total wages and have been so proportioned. The other elements of cost above are related to the total production and should not be affected appreciably by the specific conversion process. No credit has been taken for byproduct recovery, such as flue dust and steam, which could amount to about 60 cents per ton.

This is based on the average generation of 1,000 pounds of steam per ton of steel.

TABLE III

	500,000 tons		1,000,000 tons	
	Oxygen converter	Open hearth	Oxygen converter	Open hearth
1. Fuel (60 cents per MM B. t. u.)	----------	$1.98	----------	$1.98
2. Fluxes	$1.17	.50	$1.17	.50
3. Furnace refractories	.30	.70	.30	.70
4. Ladle refractories	.15	.15	.15	.15
5. Furnace repair	.60	1.50	.60	1.50
6. Molds and stools	.65	.65	.65	.65
7. Production labor	.80	1.60	.80	1.60
8. Maintenance labor and materials	.42	.70	.33	.55
9. Oxygen	1.00	.20	1.00	.20
10. Supplies, tools, and lubricants	.16	.20	.16	.20
11. Water, steam, and power	.30	.30	.30	.30
12. Yard switching	.20	.20	.20	.20
13. Slag disposal	.30	.30	.30	.30
14. Indirect labor	.20	.20	.20	.20
15. Employee benefits	.30	.30	.30	.30
16. General expense	.40	.40	.40	.40
Subtotal	6.95	9.88	6.86	9.73
17. Fixed charges (at 12 percent)	2.42	4.75	1.52	4.52
Total	9.37	14.63	8.38	14.25

The cost studies presented here are perhaps theoretical to some degree. Where possible, they are based on the experience of the existing Austrian oxygen-converter shops with due allowance for conditions in this country. In those cases where data is lacking, experience from Bessemer converter plants was used as a basis of cost estimation. In the remainder of the cases, the knowledge of the requirements of the process as compared to an open-hearth furnace was used to develop the cost figures.

It is the opinion of the authors that the economic importance of the oxygen-converter process is so compelling that the process must be given detailed study and evaluation for any program involving plant modernization or involving an increase in ingot capacity.

BIBLIOGRAPHY

1. Basic Open Hearth Steelmaking, published by the American Institute of Mining and Metallurgical Engineers, second edition, 1951.
2. Metallurgical Problems, by Allison Butts, published by McGraw-Hill Book Co., second edition, 1943.
3. Fuel Flue Gases, published by American Gas Association, 1940.
4. Comparative Economics of Open Hearth and Electric Furnaces for Production of Low Carbon Steel, published by Bituminous Coal Research, Inc., 1953.

NATIONAL STEEL CORP.,
Cleveland, Ohio October 8, 1957.

Mr. PAUL R. DIXON,
Counsel and Staff Director, Senate Subcommittee on Antitrust and Monopoly, Senate Office Building, Washington, D. C.

DEAR MR. DIXON: I am enclosing herewith a letter addressed to Senator Kefauver, who I am advised is still in Europe.

Under the circumstances, I feel it is important that he is promptly advised of my situation so that he will have ample opportunity to make what other arrangements he thinks may be most appropriate.

Thanks very much.

Yours very truly,

GEORGE M. HUMPHREY,
Chairman of the Board.

NATIONAL STEEL CORP.,
Cleveland, Ohio, October 8, 1957.

Hon. ESTES KEFAUVER,
Chairman, Subcommittee on Antitrust and Monopoly,
United States Senate Office Building, Washington, D. C.

DEAR SENATOR: I have a letter from your counsel and staff director, dated September 27, requesting me to appear before the subcommittee on October 24, and asking for certain information from National Steel Corp. This data that you requested is being compiled and will be delivered to you promptly.

As you know, I have just recently assumed the position of chairman of the Board of National Steel Corp. During nearly 5 years just passed that I was in Washington, my activities were confined exclusively to the Government's business. I had no connection with the company, and am unfamiliar with its activities during that period. There are, therefore, no facts to which I could testify that would have any value so far as your present inquiry is concerned. My return to the steel industry since my retirement from public office is so recent that I am not yet ready to venture any opinions about the future of the industry, and it would be entirely inappropriate for me to speculate on any hypothetical situations.

There are many others in the industry who would be much more helpful to the committee than I could be, and, under these circumstances, I am sure you will excuse me from the personal appearance requested.

Very truly yours,

G. M. HUMPHREY,
Chairman of the Board.

ANTITRUST AND MONOPOLY SUBCOMMITTEE,
October 11, 1957.

Hon. GEORGE M. HUMPHREY,
Chairman of the Board, National Steel Corp.,
Cleveland, Ohio.

DEAR MR. HUMPHREY: I wish to acknowledge your letter of October 8, enclosing therewith a letter addressed to Senator Kefauver. In your letter to Senator Kefauver you conclude by requesting to be excused from appearance before the subcommittee on October 24.

Senator Kefauver will return from Europe on either October 17 or 18. In accordance with your request, I shall promptly call your letter to his attention. I am quite certain that the Senator will advise you at that time as to whether your appearance is still desired on October 24.

Yours very truly,

PAUL RAND DIXON,
Staff Director and Counsel.

ANTITRUST AND MONOPOLY SUBCOMMITTEE,
October 17, 1957.

Hon. GEORGE M. HUMPHREY,
Chairman of the Board, National Steel Corp.,
Cleveland, Ohio.

DEAR MR. HUMPHREY: Your letter of October 8 addressed to me and forwarded to Mr. Paul R. Dixon, staff director of the Antitrust and Monopoly Subcommittee, has just been handed to me upon my return to my office from Europe. In this letter you request to be excused from appearing before the subcommittee on October 24.

When I directed Mr. Dixon to invite you and such other officials of National Steel Corp. as you might desire to have accompany you to the hearing on October 24, I fully realized that you had but recently assumed your position as chairman of the board of National Steel Corp. It was for this reason that I suggested that you might desire to have other officials of National accompany you to the hearing. The subcommittee is most anxious to have responsible officials of National Steel Corp. appear on October 24, as requested, and explain the recent price increase by National Steel Corp., as well as the pricing practices of the corporation in general.

Although you may be reluctant to testify concerning any past specific pricing practices of the steel industry, or of the National Steel Corp. in particular, the subcommittee is, nevertheless, most anxious to interrogate you generally on current and future price tendencies in the steel industry. You are therefore requested to appear before the subcommittee, in company with other National officials who can explain recent pricing practices of your corporation, at 10 a. m., October 24, 1957, in room 318 of the Senate Office Building, Washington, D. C.

Sincerely,

ESTES KEFAUVER, *Chairman.*

ANTITRUST AND MONOPOLY SUBCOMMITTEE,
October 18, 1957.

Hon. GEORGE M. HUMPHREY,
Chairman of the Board, National Steel Corp.
Cleveland, Ohio.

DEAR MR. HUMPHREY: Since yesterday, when I wrote to you requesting that you and such other officials of National Steel Corp. as you might desire appear before the subcommittee on October 24, 1957, Senator Everett M. Dirksen has informed me that it will be impossible for him to be present at the hearings on either October 24 or 25, and requested that the hearings be set over for National Steel Corp., beginning at 10 a. m., October 28. Senator Dirksen stated that he was especially anxious to be present at the hearings when National appeared and testified.

In accordance with Senator Dirksen's request, I am, accordingly, rescheduling your appearance and that of other National Steel Corp. officials from October 24 to 10 a. m., October 28, 1957, in room 318, Senate Office Building, Washing, D. C.

Sincerely,

ESTES KEFAUVER, *Chairman.*

NATIONAL STEEL CORP.,
Pittsburgh, Pa., October 11, 1957.

PAUL R. DIXON,
Counsel and Staff Director, Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, Senate Office Building, Washington, D. C.

DEAR MR. DIXON: Mr. George Humphrey has asked me to transmit to you the answers to the questions contained in your letter of September 27, 1957. The attached schedule, which has been marked "Schedule A," provides the answers to the first three questions. The information requested in question No. 4 is supplied in schedule B. The amounts shown on this schedule include compensation to directors and to the chairman, president, all vice presidents, secretary, treasurer, and comptroller of National Steel Corp.

The information in answer to your question No. 5 is provided in schedule C, and the information informally requested by you, having to do with the operating rate of National Steel Corp. in percent of ingot capacity, is provided in schedule D. Our answers to questions Nos. 6, 7, and 8 are set forth in schedule E.

Very truly yours,

PAUL E. SHROADS,
Senior Vice President.

SCHEDULE A.—*National Steel Corp.*

Year	1. Common dividend per share for the period 1940–57, inclusive (showing stock splits, if any)		2. Number of common shares outstanding as of Dec. 31 for period 1940–56 and as of June 30, 1957	3. Earnings per share after taxes for period 1940–56 and through 2d quarter 1957	
	Amount	Adjusted [1]		Amount	Adjusted [1]
1940	$2.50	$0.76	2,204,667	$6.83	$2.07
1941	3.25	.98	2,205,667	7.75	2.35
1942	3.00	.91	2,205,667	5.41	1.64
1943	3.00	.91	2,206,267	5.30	1.61
1944	3.00	.91	2,206,392	4.87	1.48
1945	3.00	.91	2,206,492	5.04	1.53
1946	3.25	.98	2,230,642	9.17	2.78
1947	4.00	1.21	2,230,817	12.03	3.65
1948	5.00	1.67	2,453,900	16.35	5.45
1949	5.50	1.83	2,453,950	16.02	5.34
1950	2.85		7,362,045	7.85	
1951	3.00		7,362,045	6.15	
1952	3.00		7,362,045	5.10	
1953	3.25		7,362,045	6.68	
1954	3.00		7,362,045	4.12	
1955	3.25		7,379,685	6.54	
1956	4.00		7,404,318	7.09	
6 months 1957	2.00		7,413,339	3.52	

[1] Adjusted for 3-for-1 split in March 1950 and 10-percent stock dividend in December 1948.

(4) Executive salaries for period 1940–56, including bonuses, if any, for directors and officers:

SCHEDULE B—*National Steel Corp.*

Year:	*Total salaries*	Year—Continued	*Total salaries*
1940	$734,161	1949	$1,263,503
1941	880,861	1950	1,642,511
1942	880,861	1951	1,693,893
1943	914,611	1952	1,350,382
1944	902,711	1953	1,285,662
1945	916,161	1954	1,076,232
1946	1,159,483	1955	1,145,273
1947	1,200,962	1956	1,320,090
1948	1,240,238		

(5) Stock option rights of officers and directors, if any, for period 1951 through June 1957 including grants by dates with prices and names of officials; those options that were exercised with names, dates, and market prices:

SCHEDULE C

	Number of shares granted	Exercised		
		Date	Number of shares	Market price
June 29, 1951, $42:				
T. E. Millsop	9,000	July 21, 1955	9,000	$60.250
J. J. Munns	1,200		None	
Paul E. Shroads	1,000	Nov. 24, 1954	1,000	59.125
W. A. Murphy	1,500	Aug. 15, 1951	1,500	49.000
C. J. Klein	600	Aug. 29, 1951	300	52.625
Do		May 11, 1954	300	51.000
A. C. Childs	600		None	
W. E. Prosser	200	Nov. 28, 1951	25	52.375
Do		May 28, 1953	40	45.000
Do		Aug. 24, 1954	25	50.375
Do		May 25, 1955	110	64.875
F. T. Bowen	200	Jan. 19, 1953	20	50.375
Do		Feb. 8, 1955	80	62.000
Do		Feb. 28, 1957	100	66.500
W. S. Schwoebel	200	Feb. 17, 1955	100	63.500
Do		July 27, 1955	100	60.625
E. F. Reed	2,000	July 21, 1955	2,000	69.250
Paul Carnahan	400	Aug. 19, 1954	75	51.500
E. O. Burgham	900	Jan. 18, 1955	900	61.250
Sept. 1, 1954, $40.50:				
T. E. Millsop	6,000	Aug. 5, 1957	6,000	75.250
Paul E. Shroads	500	July 27, 1955	500	69.625
C. J. Klein	300	Nov. 19, 1954	300	58.875
Paul Carnahan	600		None	
Sept. 8, 1955, $62.50:				
T. E. Millsop	5,000	Aug. 5, 1957	2,000	75.250
J. J. Munns	4,000		None	
Paul E. Shroads	4,500		None	
W. A. Murphy	4,000	May 3, 1956	800	75.500
A. C. Childs	2,400	Jan. 31, 1957	100	71.000
C. J. Klein	3,500	Feb. 14, 1956	700	67.000
Do		Nov. 23, 1956	700	72.750
W. E. Prosser	850	May 18, 1956	100	72.000
F. T. Bowen	1,450		None	
W. S. Schwoebel	850		None	
E. O. Burgham	4,000		None	
Paul Carnahan	4,000		None	
May 16, 1957, $63:				
E. F. Reed	5,000		None	
G. H. Love	5,000		None	

NOTE.—The above does not include option rights granted to certain individuals during the period involved who are no longer officers and directors of the company.

SCHEDULE D.—*National Steel Corp.—Operating rate in percent of ingot capacity*

Year:	*Percent*	Year—Continued	*Percent*
1938	53.9	1950	103.3
1939	82.8	1951	100.7
1940	94.9	1952	90.2
1941	98.4	1953	93.5
1942	90.6	1954	75.2
1943	92.1	1955	92.6
1944	96.2	1956	94.0
1945	92.1	1957:	
1946	83.5	1st quarter	98.8
1947	95.5	2d quarter	88.5
1948	98.4	3d quarter	80.5
1949	95.7		

SCHEDULE E

Question

6. An examination of the complaint issued by the Federal Trade Commission in docket No. 5508 on August 14, 1947, as amended on November 13, 1947, charged your corporation, as well as the other respondents, with a formula system of pricing which resulted in matched delivered price quotations. Would you illustrate how a price quotation was rendered to a customer at that time, utilizing base price, extra charge and freight rate factor?

Answer

Prior to July 28, 1948, National's method of quoting prices for its products differed between its plants in Weirton, W. Va., and Steubenville, Ohio, on the one hand, and its plant in Detroit, Mich., and also differed depending upon the location of the plant of the particular customer requesting a quotation.

The Weirton and Steubenville plants of National are located on the Ohio River, approximately 35 miles west of the city of Pittsburgh, a large steel-producing area. When an inquiry was received from a customer located closer to Weirton or Steubenville than to Pittsburgh, for a standard product, National would quote the listed plant price (then called base price) plus the actual cost of transportation from either Weirton or Steubenville, as the case might be, to the customer's plant. If the inquiry involved a special size or shape or a product having particular offstandard chemical or physical properties, National would adjust its base price by a so-called extra or deduction. This method of listing the prices of standard products, supplemented by lists of extras and deductions setting forth the added cost or the discount available for products which deviated from standard specifications, is and has been for many years used by all of National's plants.

If the customer requesting a quotation was located within the Pittsburgh area or closer to Pittsburgh than to Weirton or Steubenville, he could, of course, purchase his requirements from the Pittsburgh mills at the Pittsburgh price plus freight charges from Pittsburgh to the point of delivery. In order to sell such customers, therefore, the Weirton and Steubenville plants would have to quote a price at least as low as the Pittsburgh price plus freight. Normally this is what National did in making sales from its Weirton and Steubenville plants to such customers, and in so doing absorbed any excess of its actual transportation cost over the cost of such a shipment made from Pittsburgh.

In quoting prices for deliveries to distant areas where other producers had the advantage of shorter hauls and lower transportation charges, National, of necessity, had to absorb freight if its quotations were to be competitive. It accordingly quoted the announced price of the producer nearest to the customer's plant (adjusted by any applicable extra or deduction) plus the cost of transportation from that competitor's plant to the point of delivery. This resulted in National's absorbing the difference between the actual freight cost of shipping from its plant and the freight cost of shipping from the other producer's plant.

Great Lakes Steel Corp., a wholly owned subsidiary of National, has a plant located in a suburb of Detroit, Mich., within the Detroit railroad switching limits. There are numerous large consumers of iron and steel products within the immediate vicinity of Detroit. Prior to July 28, 1948, Great Lakes quoted a uniform delivered price to all customers located within an area having a radius of approximately 10 miles from the center of Detroit. All transportation charges were paid by Great Lakes.

For shipments out of the immediate Detroit area Great Lakes had established a zone with an average radius of approximately 95 miles from the center of Detroit. For shipments into this zone Great Lakes also quoted a uniform delivered price, which was equal to its delivered price for the product when sold in the immediate Detroit area, plus 5 cents per hundredweight, or $1 per ton, to cover the average additional transportation cost of shipping into this 95-mile zone. For deliveries outside of the two areas above described Great Lakes quoted prices calculated in the same manner as set forth above for sales by National's Weirton and Steubenville plants to distant areas.

Question

7. It is understood that on August 10, 1951, your corporation, together with the other named respondents in docket No. 5508, entered into a proposal in settlement wherein you agreed to abide by an order to cease and desist from certain practices set forth in such order. What changes in your method of pricing,

if any, did National make as the result of this order to cease and desist? Had these changes been made by National prior to the date of this order? If so, when? As the result of this order, did National offer to sell all of its steel products f. o. b. its mills or shipment points? Have you continued to offer to sell on this same basis since this change? Will you illustrate how a typical price quotation is arrived at today, utilizing both your base price, extra charge, and freight charges?

Answer

On July 28, 1948, National, as a result of the decision of the United States Supreme Court in the Cement case, abandoned the basing point and zone pricing methods of selling as described above. It established an f. o. b. price for all of its products at each of its plants, and in quoting prices quoted the f. o. b. price, adjusted by an applicable extra or deduction, plus full cost of freight to the customer's mill. During the period between 1948 and the date of the consent order of the Federal Trade Commission, August 10, 1951, referred to in this question, National offered to sell all of its steel products f. o. b. its mills, and has continuously since that time offered to sell in that manner. Many changes have been made in National's method of quoting prices since the date of the filing of the complaint by the Federal Trade Commission, some of which changes came about on July 28, 1948, and some of which came about on August 10, 1951, the effective date of the consent decree. Some of these changes are as follows:

(*a*) All customers of National can now buy at f. o. b. price plus freight.

(*b*) All so-called phantom freight inherent in the zone method of selling, and sometimes also under a basing point method of selling, has been eliminated.

(*c*) Compilations of freight charges from various producing plants throughout the country to various destinations have been eliminated. Prior to the consent order of the Federal Trade Commission, National used such freight-rate compilations as one source of information for freight charges but now computes in its traffic department all freight charges from tariffs published by the railroads and other transportation companies.

(*d*) Subject only to the capacity of loading facilities, any customer of National may accept delivery at the plant in his own vehicle or may use any other means of transportation he may desire.

As stated above, National will sell to any of its customers at its f. o. b. price plus freight. For several years, however, many customers have been unwilling to pay this price. They are located closer to the mills of another producer who will sell them at his f. o. b. price plus his lesser freight cost. National obviously cannot get this business unless it is willing to absorb a part of its shipping cost to meet the competition of the other producer.

In meeting such a situation National obtains through its representatives and salesmen, from conferences with its customers and from all other sources available to it, information with respect to the selling price, in the particular area, of the product involved. If it decides to bid for the business, it quotes its f. o. b. price plus full freight less a competitive allowance which is sufficient to reduce its price to what it thinks is the prevailing market price for the product in the particular area. In doing so it is, of course, absorbing part or all of the freight to meet competition.

Question

8. The subcommittee has had called to its attention many instances of matched bids to the Government by various manufacturers of steel products. How do you explain these same price quotations? Does National equalize its shipping charges in such instances with those of the nearest basing point of a competitor to the customer?

Answer

In quoting for delivery to the Government, National follows the same method of pricing as outlined in the answer to the previous question. It quotes its f. o. b. price plus full freight less a competitive allowance if delivery is to be made in an area where other producers have a freight advantage. National is not aware of any instances of so-called matched bids to the Government. As stated above, in selling in areas where it is at a freight disadvantage National attempts by means of a competitive allowance to quote a price as low as the Government is likely to obtain from others in the area. National employs salesmen who devote a great deal of time and effort to the gathering of market information in all the areas in which it sells its products, and it is therefore

not surprising that on occasion National's bid should be close to or even identical with the bid of a competitor.

National does not equalize its shipping charges with those of the nearest basing point of a competitor to the customer. Since the consent decree of the Federal Trade Commission in 1951 there have been no basing points and no basing-point prices. As a part of its market analysis, National takes into consideration all the information it can obtain as to the f. o. b. prices of its competitors and the freight charges for delivery from various competitors' plants to the customer, as well as all other information it can obtain as to what the product is actually selling for in the area involved. It must do this in order to arrive at a competitive price and it must, obviously, quote a competitive price if it hopes to get the business.

THORP, REED & ARMSTRONG,
Pittsburgh, Pa., August 30, 1957.

Re National Steel Corp.
ANTITRUST AND MONOPOLY SUBCOMMITTEE,
United States Senate,
Washington, D. C.
(Attention: George Clifford, Esq.)

DEAR SIRS: Pursuant to Mr. Clifford's telephone call of yesterday (amending his previous statement of August 7 that such writing was not required), we hand you herewith a memorandum setting forth the answers furnished you by telephone on August 7, 1957. Again we rely upon your assurance that all of this information will be kept strictly confidential.

Sincerely yours,

W. GORDON RAUCK.

ANSWERS TO QUESTIONS SUBMITTED BY SENATE ANTITRUST AND MONOPOLY SUBCOMMITTEE WITH LETTER OF JULY 25, 1957, TO NATIONAL STEEL CORP.

1. Approximately $0.21 per hour increase in employment costs, but the total effect by reason of increases also in costs of outside materials and services would be 2.50 to 2.75 times the employment cost increase. Also such increase, while including the $0.04 cost of living adjustment at July 1, 1957, did not include the $0.03 cost of living adjustment of January 1, 1957, which latter had not been recovered in the interim.

2. Varies between 14 and 16 man-hours, depending on factors such as the product mix and the percentage of outside-purchased raw materials used.

3. Answer is as follows:

[In percentage]

	1953	1954	1955	1956	1957
1st quarter	93.3	70.4	93.6	100.6	98.8
2d quarter	94.5	75.2	93.2	98.3	88.5
3d quarter	92.2	69.9	86.5	73.4	----
4th quarter	94.1	90.0	97.3	103.8	----

4. Answer is as follows:

	Percent
Materials and services	57
Payrolls and employee benefits	33
Depreciation, depletion, and amortization	8
Interest—less than	1
Taxes, other than Federal income tax and social security	2
Total	100

5. No specific market studies or analyses, but costs in general had increased and were expected to continue to increase.

6. This question answered by American Iron and Steel Institute.

7. Answer is as follows:

Weirton Steel Division, base prices per hundredweight

	Prior to Aug. 7, 1956	After Aug. 7, 1956	After July 1, 1957
Structural shapes	$4.60	$5.00	$5.275
Hot-rolled strip	4.325	4.675	4.925
Hot-rolled sheets	4.325	4.675	4.925
Cold-rolled strip—low carbon	6.25	6.85	7.15
Cold-rolled sheets	5.325	5.75	6.05
Galvanized sheets—including formed roofing and siding	5.85	6.30	6.60
Long terne sheets	6.25	6.70	7.00
Weirzin sheets	6.55	6.975	7.275

Great Lakes Steel Corp., base prices per hundredweight

	Prior to Aug. 7, 1956	After Aug. 7, 1956	After July 1, 1957
Hot-rolled carbon bars:			
Merchant quality	$4.75	$5.175	$5.525
Special quality	5.10	5.525	5.875
Hot-rolled carbon bars, reinforcing	4.75	5.425	5.775
Hot-rolled carbon strip	4.425	4.775	5.025
Hot-rolled carbon sheets, 18-gage and heavier	4.425	4.775	5.025
Cold-rolled carbon sheets	5.425	5.85	6.15
Cold-rolled carbon strip	6.35	6.95	7.25

[The Wall Street Journal, November 1, 1957]

BETHLEHEM STEEL THIRD PERIOD NET FELL FROM SECOND QUARTER BUT TOPPED 1956

PROFIT IMPROVEMENT FORECAST FOR LAST QUARTER; OUTPUT NOW AT 91 PERCENT OF CAPACITY

By a Wall Street Journal staff reporter

NEW YORK.—Bethlehem Steel Corp. earned 86 cents a common share in the 3 months ended September 30, a decline from the $1.09 a share in the second quarter but considerably above the earnings equivalent to 6 cents a present share posted in the strike-affected third quarter last year.

President Arthur B. Homer said the Nation's second largest steel producer expects fourth quarter profits "will be improved over the third quarter."

Mr. Homer—the company announced yesterday he was succeeding Eugene G. Grace as Bethlehem's chief executive officer—reported the concern's average steel production declined to 89.3 percent of rated capacity in the third quarter from 97.5 percent in the second quarter. Here again, operations were considerably above the 58.3 percent rate a year earlier, when a nationwide steel strike started at the beginning of July and wound up in early August.

Mr. Homer reported, however, that currently production is running a bit above the third-quarter average. He said the present rate is 91 percent and that was the October average.

Bethlehem anticipates, Mr. Homer said, its production "will be pretty much around 90 percent the rest of this year, although it "may be a little below" that, and that rate—in tons—might carry on into the first quarter of 1958.

He explained that because the figure on rated capacity will be increased the first of January the percentage operating rate early next year might be nearer 80 percent of the new figure.

Bethlehem's production capacity was rated for 1957 at 20.5 million tons of steel ingots a year, but will rise to about 23 million tons the 1st of January. The rating for the industry as a whole is expected to go up nearly 7 million tons over the 1957 figure to the vicinity of 140 million tons.

Bethlehem directors declared a dividend of 60 cents a common share, the same as in previous quarters this year. This dividend, payable December 2 to stock of record November 12, brings the 1957 total to $2.40 a common share. This is equivalent to $9.60 on the shares outstanding before a 4-for-1 split last February. A total of $8.50 was paid last year on the old shares.

Profits for the first 9 months were a record $143.7 million, equal to $3.11 a common share. They were up from slightly below $99.7 million, or an adjusted $2.12 a common share in the first 3 quarters last year.

Third quarter billings, nearly $638.7 million, were a record for the period and pushed the 9-month billings total above $2 billion, another new high. Billings for the latest 3 months showed the same pattern as the earnings—up from $389.6 million a year earlier but down from the $687.2 million of the second quarter.

Bethlehem's unfilled orders—aided by a year-to-year climb in shipbuilding work—showed a rise September 30 over a year earlier, but were down from the end of the second quarter. The backlog figures: $1,231 million this September 30, of which $591 million was in ship construction and repairs; $1,096 million a year earlier, including $342 million of ship work, and $1,359 million on June 30, with $655 million in the shipbuilding division.

Mr. Homer's reports and predictions of Bethlehem's operating rate were above those made earlier this week by Roger M. Blough, chairman of United States Steel Corp. for the largest steel producer. Mr. Blough reported United States Steel operated at 81.1 percent of rated capacity in the third quarter and estimated that fourth-quarter production of both that company and the industry as a whole would "perhaps be at a rate a little under 80 percent or in that vicinity."

Bethlehem usually operates at a higher percentage of capacity than the industry average because of the company's "product mix"—the types of steel it produces.

Mr. Homer declined to estimate the pace of the whole industry's operations in the current quarter. He also would not go beyond first quarter, 1958, for Bethlehem itself, "except to say that it looks to us as if there is a leveling off in business."

He termed this "leveling off," however, "a readjustment in the progress of our economy," which occurs from time to time. He emphasized: "Don't be too much alarmed or pessimistic about the present situation."

Demand for Bethlehem's heavy-steel products, such as structurals and plates, is expected to be strong throughout the year, Mr. Homer said. Enough business has already been booked to assure that, he asserted.

Mr. Homer did note that the supply situation on structural and heavy-plate steel is less tight than it has been because of new-production facilities that have started up.

He explained that the decline in third-quarter profits and operations from the second-quarter's levels stemmed from such seasonal influences as vacations and starting-up costs on new facilities completed at Sparrows Point, Md. He said price increases last summer failed to cover completely a rise in wage costs July 1.

Mr. Homer said there has been some decline in demand for some steel items and "we have not had quite what we expected from the automobile industry."

As United States Steel Chairman Blough had done Tuesday, Mr. Homer cited heavy buildup in steel users' inventories in the first half of this year, and then the turn-around to consumers' eating into these stocks of steel. He declined to estimate when this inventory reduction process would halt, although he said users' stocks are low.

Mr. Homer said there have been no deferments or cutbacks in Bethlehem's announced expansion plans. He reported $49,459,000 was spent on this program in the third quarter, leaving $187 million of work still to be completed under plans already approved. He said he expects $100 million to be spent in all of 1958 on expansion.

He said there has been some "slowing up" in building by Bethlehem customers, but "it doesn't amount to much as far as our order books are concerned."

Bethlehem currently has contracts for 44 tankers, he reported, and added the shipbuilding unit would be operating into 1960 or perhaps longer on that current backlog.

He said there have been few orders recently in the wake of the big boom in tanker construction stimulated by the Suez Canal closing last year. He noted,

however, that Bethlehem was disclosed Wednesday to have submitted the low bid to the United States Maritime Administration on four cargo ships for American Export Lines, Inc.

Bethlehem Steel Corp. and its subsidiaries report for the quarter ended September 30, 1957, a net income of $40,051,465 after depreciation, depletion, interest, income taxes, etc., equal, after preferred dividends, to 86 cents a share on the 44,639,508 common shares outstanding, giving effect to the 4-for-1 stock split in January 1957, and conversions of 25-year debentures through September 30, 1957.

This compares with $4,428,143 or 6 cents a common share for the quarter ended September 30, 1956, and with $50,273,507 or $1.09 a share for the quarter ended June 30, 1957, the share earnings in each of the prior periods being based on common shares outstanding at September 30, 1957.

For the 9 months ended September 30, net income was $143,752,627 or $3.11 a common share, against $99,690,157 or $2.12 a share for the 9 months ended September 30, 1956.

Consolidated income account of Bethlehem Steel Corp. for the quarter ended September 30, compares as follows:

	1957	1956
Earned per common share [1]	$0.86	$0.06
Net billings	638,698,351	389,610,779
Total income	104,447,145	34,424,556
Interest, etc	1,776,165	2,399,491
Depreciation, depletion, etc.[2]	27,619,515	26,596,922
Federal income taxes	35,000,000	1,000,000
Net income	40,051,465	4,428,143
9 months ended Sept. 30:		
Earned per common share [1]	3.11	2.12
Net billings	2,002,033,152	1,659,520,921
Total income	369,906,745	278,388,209
Interest, etc	6,013,765	7,680,470
Depreciation, depletion, etc.[2]	84,140,353	80,017,582
Federal income taxes	136,000,000	91,000,000
Net income	143,752,627	99,690,157

[1] After preferred dividends, and based in all periods on the 44,639,508 common shares outstanding Sept. 30, 1957, after giving effect to the 4-for-1 stock split in January 1957 and conversions of 25-year debentures through Sept. 30, 1957.

[2] Includes amortization of emergency facilities.

Scrap iron and steel prices—No. 1 heavy melting steel

[Dollars per gross ton]

	Composite	Pittsburgh	Philadelphia	Chicago
1956	$53.45	$53.37	$54.20	$52.79
October 1957	38.05	39.02	38.50	36.63
Nov. 1, 1957	36.17	36.00	36.50	36.00

NOTE.—Percentage decline—1956 average to October 1957: 28.8 percent. Percent decline—1956 to Nov. 1, 1957, equals 32.4 percent.

Source: American Metal Market, Saturday, Nov. 2, 1957, p. 11.

Tin prices—New York, prompt

[Per pound]

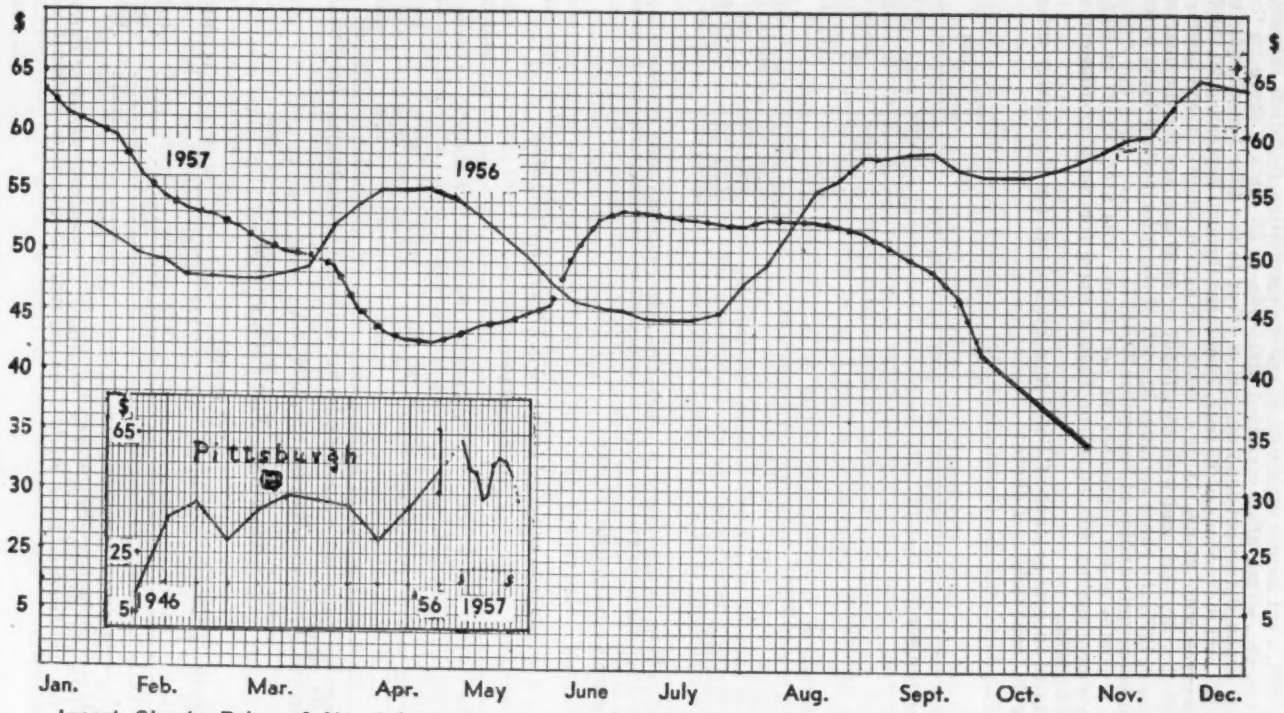
1956 average	$1.0126
1957:	
Sept	.9331
Oct. 11	.92
Nov. 1	.90

NOTE.—11 percent decline—1956 average to Nov. 1, 1957.

Source: 1956 and September 1957, U. S. Department of Commerce, Survey of Current Business; Oct. 11, American Metal Market, Oct. 12, 1957; Nov. 1, American Metal Market, Nov. 2, 1957.

[American Metal Market, October 12, 1957]

WORLDWIDE SLUMP IN DEMAND SENDS SCRAP ROCKET EARTHWARD



Insert Chart—Price of No. 1 heavy melting steel at Pittsburgh by years 1946-56; by months 1957 with current level in dots. Main Chart—Composite price by weeks on No. 1 heavy melting at Pittsburgh, Chicago, Buffalo and Philadelphia, delivered to mill.

NEW YORK, October 11.—Scrap iron never stands still—it's always on the move, 'tis said—speaking of prices. The nearer it has come to a standstill, physically, the faster it has moved pricewise. In the past 6 weeks it has been a rocket coming to earth with an average speed of about $2 a week and an acceleration as high as $4 in a week. Since early last December the composite price of No. 1 heavy melting steel, delivered to consumer, as reported by American Metal Market, has plummeted about $25 or 38 percent—with the bottom still to be set.

Although this drastic decline brings punishment to all who are long on scrap, the accompanying chart indicates that current market values retain a substantial portion of their postwar appreciation. To illustrate this point, an annual chart of Pittsburgh prices has been inserted into the larger chart of weekly composite fluctuations.

Postwar prices opened only a little above late prewar prices, and then in the 3-year period, 1946–48 they nearly doubled. In 1949 and again in 1954 the averages for whole years fell below $30. The low of $25 in 1954 (March) was only a little more than half of the high of $46 in 1953 (July).

From the low of 1954 to the high of $67 in 1956 (November) as indicated by a line in the chart showing the 1956 spread, the ascent was irregular but spectacular, sometimes reaching the extraordinary acceleration of $5 to $8 in a month.

In both its ascent to more than triple the early postwar price and its return toward earth (midway between postwar high and low), this rocket has been powered by worldwide conditions. The appearance of rapidly expanding foreign demand for scrap in the United States in 1955, on top of improving domestic demand, furnished the fuel that sent scrap prices up. From 316,000 net tons sent abroad in all of 1953, this business soared to 776,000 tons in the one month of March 1957.

Since then, a combination of less need abroad, financial stringency in Japan (largest scrap customer), export limitations, and an overabundant supply of pig iron in the United States, have furnished the power to force the rocket down.

In addition to the hard lines that a falling market places on dealers, it means less income to many manufacturers, railroads, Defense Department and others. In the past 2 or 3 years some of the rising cost of steel products was offset by high salvage values on scrap. Much of this counterbalance now is lost.

[From American Metal Market, Saturday, November 2, 1957]

TIN

MARKET WEAK AND DECLINING—PRICES ONE-HALF CENT TO FIVE-EIGHTHS CENT LOWER

NEW YORK, November 1.—The tin market in London today continued fairly active, and while the cash price remained unchanged, the forward position price dropped to lower levels. In the morning session, cash tin held unchanged, whereas the 3-month price sagged £2 10s., on a turnover of 160 tons. Underlying weakness was evident throughout the afternoon session, but while cash tin held unchanged at £730 bid, the forward-position price declined another £1 10s., closing at £719 bid, on a turnover of 110 tons. In trade channels, a quiet-trade demand was noted, while the downturn in copper values contributed to the easier tone. Buying for buffer-pool account continues to feature the cash-tin market and held responsible for the £730 bid. The other base metals also reacted on reported profit taking.

Poor trade demand was said to be responsible for the steady decline in Singapore, particularly during the past few days. The price declined £1 5s. 0d., to £692 15s. 0d., ex-smelter, the lowest level recorded since early March 1955.

LONDON COMMENT

Trade channels view with some concern the persistent pressure placed on the forward quotation in London, and the widening of the backwardation from £2 prevailing on October 1 to £11 today. In explanation of this condition, and with a view of giving our readers some idea of the thinking going on abroad, we present the following editorial comment taken from the Financial Times of London:

"The size of the International Tin Agreement's holding of tin at the end of June will surprise most sections of the market. It is larger than most estimates.

The buffer stock's funds were sufficient to buy some 13,000 tons at the floor price of £730 a ton, and between the beginning of April and the end of June the manager had bought almost 4,000 tons, even though neither the cash nor the forward price had been below £758 a ton during that period. This still left him able to purchase the best part of 9,000 tons at the floor price and therefore to remove the whole of the current year's surplus on the Council's revised estimate that the surplus will amount to some 12,500 tons. But, even so, it looks as though he may have bought too much too early.

"Why this should be so is largely explained by the Council's revision of the estimate of the size of the surplus. Earlier this year it was put at around 6,000 tons, barely half the present figure. Although no breakdown of the estimates is available, it is probable that the main reason for the increase is that the new figure makes allowance for larger Russian deliveries than was expected earlier. The fall in world output outside the U. S. S. R. has continued this year and overall consumption has so far been a little higher than in 1956, so that the apparent surplus has been narrowing, and might have continued to narrow but for two things: The flow of Russian exports is still at a high level, and the outlook for consumption of tin, as of other metals, is less promising.

"Because of these changes, it would not be surprising to discover that the buffer stock manager had altered his buying policy. This cannot be confirmed until the size of his stock at the end of September is published in 3 months' time, but the trend of the market suggests that he has been buying less in recent months, and that it is unlikely that he will want to use up his present resources so quickly. Moreover, if he thought that he was in sight of accumulating 10,000 tons, he would inform the chairman of the Council and the possibility of restrictions on exports would come up for discussion; but there was no mention of this at last week's meeting of the Council. It is highly probable, therefore, that he has bought much less recently even though the market has been in greater need of support.

"If this reading of his actions is correct, the market can expect little help from this source in the near future. He cannot allow the spot price to fall any further, but he can allow the 3 months' quotation to drift. Thus the present market trend will probably continue, provided there is neither a further sharp fall in output nor a strong recovery in consumer demand."

TIN MARKET WEAK

The tin market here this morning was an idle affair, with trade interests displaying keen disappointment at the lack of consumer buying interest, despite the record low prices recorded both here and abroad. Based on the lower market in the East, and an easier sterling market, dealers prices were revised downward one-fourth cent, with strong indications that lower prices would be considered on firm buying interest. Rumor has it that some small business was completed, but details were lacking. At around noontime, the following prices were recorded: Spot, prompt, November and December at 90.37½ cents; January at 90.25 cents, and February at 90.12½ cents.

The tin market in the afternoon came under professional selling pressure and prices moved irregularly lower. The pressure appeared in certain channels only, while others were inclined to hold at prices close to the noon level. Again in certain channels only, a good trade was reported, while others complained of lack of buying interest. Reports were heard of spot tin offered at 89.87½ cents, while actual trades were reported at 90.37½ cents and 90.25 cents, with January going at 90.25 cents and 90 cents, February at 89.87½ cents, and March at 90.25 cents. The undertone at the close was weak.

Tin averages, October 1957

	Open	High	Low	Close	Average
NEW YORK	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Straits:					
Spot	93.25	93.25	90.62½	90.62½	91.848
Prompt	93.12½	93.12½	90.62½	90.62½	91.842
3d month	92.12½	92.12½	90.50	90.50	91.478
LONDON METAL EXCHANGE	£ s.	£ s.	£ s.	£ s.	£ s. d.
Standard:					
Spot settlement price	739 10	739 10	730 10	730 10	731 17 5
3 months closing bid	737 0	737 0	723 0	723 0	728 8 3
SINGAPORE					
Straits tin exsmelter	713 10	713 10	694 0	694 0	702 15 2

MATERIAL USED AS BASIS FOR CHARTS PRESENTED BY SUBCOMMITTEE ON NOVEMBER 5, 1957

Hot-rolled sheets—Trend of price and production, 1947–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]		Production index (average 574.2) [3]
		All sheets	Hot-rolled sheets	
			Percent	
1947 (percent of all sheets)			50.0	
March	85.3	1,275		110.9
June	85.3	1,225		106.6
September	94.6	1,224		106.5
December	94.6	1,352		117.7
1948 (percent of all sheets)			39.1	
March	94.6	1,410		96.0
June	93.1	1,302		88.6
September	108.6	1,360		92.6
December	117.7	1,476		100.5
1949 (percent of all sheets)			40.8	
March	117.7	1,562		110.9
June	108.6	1,355		96.2
September	108.6	1,497		106.3
December	117.7	1,506		107.0
1950 (percent of all sheets)			39.2	
March	114.8	1,719		117.3
June	114.8	1,735		118.4
September	114.8	1,697		115.8
December	122.5	1,843		125.8
1951 (percent of all sheets)			40.4	
March	122.5	1,937		136.2
June	122.5	1,739		122.3
September	122.5	1,548		108.9
December	122.5	1,590		111.8
1952 (percent of all sheets)			37.2	
March	122.5	1,609		104.2
June	122.5	321		7.8
September	128.0	1,639		106.1
December	128.0	1,843		119.4
1953:				
March	128.0			119.6
June	133.5			119.4
September	137.8			109.9
December	137.8			97.0
1954:				
March	137.8			82.7
June	137.5			93.0
September	141.1			74.7
December	141.1			113.5
1955:				
March	140.9			144.3
June	140.9			134.6
September	148.8			133.7
December	148.8			154.4
1956:				
March	154.6			148.5
June	154.6			142.1
September	164.7			146.2
December	164.7			143.8
1957:				
March	172.0			131.0
June	172.0	716		124.6
September (average)	179.2	550		95.8

[1] Bureau of Labor Statistics Wholesale Price Series Sheets, Hot-Rolled, Carbon Steel (Code 10–14–46).

[2] From Department of Commerce, Business Statistics, 1951, 1953, and 1955 editions, and Survey of Current Business. Data for 1947 to 1952, inclusive, represent estimates based on percent of shipments of all sheet for year represented by hot-rolled sheets—the percent figure for each year taken from American Iron & Steel Institute, Annual Statistical Report, 1950 and 1956 editions. The index of shipments is based on average monthly shipments for the 36-month 1947–49 base period (1947–49 average monthly shipment in tons noted at column head).

[3] Computed from shipments data in short tons using monthly average for 36 months, 1947–49, noted in column head as a base.

Tinplate and terneplate—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 315.33) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 315.33) [3]
1937	77.4	230.0	72.9	1951—March	128.7	397.0	125.9
1938	75.3	135.0	42.8	June	128.7	425.0	134.8
1939	74.0	213.0	67.5	September	128.7	358.0	113.5
1940	74.0	224.0	71.0	December	128.8	352.0	111.6
1941	74.0	297.0	94.2	1952—March	128.8	478 0	151.6
1942	74.0	221.0	70.1	June	128.8	104.0	33.0
1943	74.0	175.0	55.5	September	132.5	412.0	130.7
1944	74.0	217.0	68.8	December	132.5	373.0	118.3
1945—March	74.0	288.0	91.3	1953—March	132.5	448.0	142.1
June	74.0	287.0	91.0	June	132.5	441.0	139.9
September	74.0	213.0	67.5	September	132.5	340.0	107.8
December	74.0	210.0	66.6	December	132.5	266.0	84.4
1946—March	74.0	249.0	78.9	1954—March	132.5	475.0	150.6
June	74.0	247.0	78.3	June	132.5	690.0	218.8
September	74.0	244.0	77.4	September	132.5	580.0	183.9
December	74.0	265.0	84.0	December	134.0	270.0	85.6
1947—March	85.1	293.0	92.9	1955—March	134.0	514.0	163.0
June	85.1	308.0	97.7	June	134.0	651.0	206.5
September	85.1	304.0	96.4	September	134.0	588.0	186.5
December	85.1	370.0	117.4	December	140.3	328.0	104.0
1948—March	100.6	393.0	124.6	1956—March	140.3	[4] 618.6	196.2
June	99.1	334.0	105.9	June	146.6	[4] 547.2	173.5
September	100.6	334.0	105.9	September	146.6	[4] 471.9	149.7
December	100.6	400.0	126.9	December	148.2	[4] 355.1	112.7
1949—March	114.7	333.0	105.6	1957—March	148.2	[4] 273.2	86.6
June	114.7	387.0	122.7	June	148.2	[4] 342.3	108.6
September	114.7	394.0	124.9	September (average)	153.7	[4] 432.4	137.1
December	114.7	326.0	103.4				
1950—March	111.0	363.0	115.1				
June	111.0	438.0	138.9				
September	111.0	424.0	134.5				
December	111.0	401.0	127.2				

[1] Bureau of Labor Statistics Wholesale Price Series, Tinplate (Code 10–14–66). Data price to 1947 represent data on old base of 1935–39 converted using overlap and reciprocal of 0.74129.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955 and Survey of Current Business.

[3] Computed from shipments data in short tons using monthly average for 36 months 1947–49 noted in column head as a base.

[4] Indicates estimates necessitated by a revision of data grouping in the Survey which resulted in tinplate and terneplate being put in an aggregate called tin mill products. Using an overlap covering 1955 it was found that tinplate and terneplate accounted for an average of 87.55 percent of tin mill products and this percentage was applied to 1956 and 1957 data to get the above figures.

Hot-rolled bars, carbon—Trend of production and price, 1947–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 625.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 625.66) [3]
1947—March	85.8	720	115.1	1953—March	127.9	894	142.9
June	85.8	658	105.2	June	136.7	843	134.7
September	95.1	621	99.3	September	142.6	723	115.6
December	95.1	664	106.1	December	143.2	586	93.7
1948—March	95.1	733	117.2	1954—March	143.2	546	87.3
June	93.6	679	108.5	June	143.2	532	85.0
September	109.2	689	110.1	September	147.7	471	75.3
December	109.2	745	119.1	December	147.0	619	98.9
1949—March	109.2	757	121.0	1955—March	147.0	764	122.1
June	109.2	564	90.1	June	147.0	770	123.1
September	109.2	524	83.8	September	157.3	739	118.1
December	110.7	606	96.9	December	157.3	834	132.3
1950—March	112.3	652	104.2	1956—March	161.7	877	140.2
June	112.3	693	110.8	June	161.7	826	132.0
September	112.3	689	110.1	September	174.2	756	120.8
December	120.1	732	117.0	December	174.2	788	125.9
1951—March	120.1	792	126.6	1957—March	178.6	768	122.8
June	120.1	734	117.3	June	178.6	689	110.1
September	120.1	712	113.8	September (average)	188.9	569	90.9
December	120.1	748	119.6				
1952—March	120.1	801	128.0				
June	120.1	123	19.7				
September	127.9	787	125.8				
December	127.9	865	138.3				

[1] Bureau of Labor Statistics Wholesale Price Series, Hot-Rolled Bars, Carbon (Code 10–14–39). Data price to 1947 based on old series with a 1935–39 base—converted to 1947–49 base by overlap and reciprocal of 0.7303.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Production index is based on the average monthly shipments in short tons for the 36-month 1947–49 period—which is noted at the column head.

Reinforcing hot-rolled bars—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 126.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 126.66) [3]
1937	69.3	74	58.4	1951—March	123.3	161	127.1
1938	61.2	70	55.3	June	123.3	152	120.1
1939	54.8	101	79.7	September	123.3	160	126.3
1940	56.4	120	94.7	December	123.3	162	127.9
1941	59.5	158	124.7	1952—March	123.3	193	152.3
1942	62.4	154	121.6	June	123.3	28	22.1
1943	62.4	42	33.2	Septermber	131.4	181	142.9
1944	62.4	54	42.7	December	131.4	211	166.6
1945—March	62.4	61	48.2	1953—March	131.4	173	136.6
June	62.4	68	53.7	June	140.7	157	124.0
September	62.4	75	59.2	September	147.6	163	128.7
December	62.4	91	71.8	December	146.9	125	98.7
1946—March	68.2	104	82.1	1954—March	151.5	125	98.7
June	68.2	107	84.5	June	151.5	211	166.6
September	68.2	119	94.0	September	156.4	151	119.2
December	69.8	107	84.5	December	156.1	123	97.1
1947—March	84.3	114	90.0	1955—March	153.4	161	127.1
June	82.7	123	97.1	June	153.4	209	165.0
September	92.5	124	97.9	September	164.3	186	146.8
December	92.5	128	84.5	December	164.3	194	153.2
1948—March	92.5	138	109.0	1956—March	164.3	217	171.3
June	90.8	127	100.3	June	164.3	275	217.1
September	111.9	129	101.8	September	177.4	234	184.7
December	111.9	136	107.3	December	177.4	240	189.5
1949—March	111.9	150	118.4	1957—March	178.9	240	189.5
June	111.9	141	111.3	June	178.9	233	184.0
September	111.9	162	127.9	September (average)	189.6	188	148.4
December	113.6	138	109.0				
1950—March	115.2	116	91.6				
June	115.2	138	109.0				
September	115.2	151	119.2				
December	123.3	152	120.0				

[1] Bureau of Labor Statistics Wholesale Price Series, Bars, Hot-Rolled, Reinforcing (Code 10-14-41). Data prices to 1947 based on old series on 1935–39 base, converted to 1947–49 base by using overlap reciprocal of 0.59638.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from shipments data in short tons by using the monthly average for 36-month 1947–49 period noted in column head as a base.

Cold-rolled sheets—Trend of price and production, 1947–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]			Production index (average 616.4) [3]
		All sheets	Cold-rolled		
			Amount	*Percent*	
1947 (percent of all sheets)				51.72	
March	88.2	1,275	659.4		107.0
June	88.2	1,225	633.6		102.8
September	96.5	1,224	633.1		102.7
December	96.5	1,352	698.5		113.4
1948 (percent of all sheets)				44.16	
March	96.5	1,410	622.7		101.0
June	94.1	1,302	575.0		93.3
September	107.3	1,360	600.6		97.4
December	107.3	1,476	651.8		105.7
1949 (percent of all sheets)				46.56	
March	107.3	1,562	727.3		118.0
June	107.3	1,355	630.8		102.3
September	107.3	1,497	697.0		113.1
December	110.8	1,506	701.2		113.8
1950 (percent of all sheets)				50.18	
March	114.4	1,719	862.6		139.9
June	114.4	1,735	870.6		141.2
September	114.4	1,697	851.6		138.2
December	120.4	1,843	924.8		150.0
1951 (percent of all sheets)				49.01	
March	120.4	1,937	949.3		154.0
June	120.4	1,739	852.3		138.3
September	120.4	1,548	758.7		123.1
December	120.4	1,590	779.3		126.4
1952 (percent of all sheets)				49.58	
March	120.4	1,609	797.7		129.4
June	120.4	321	[4]		[4]
September	125.7	1,639	812.6		131.8
December	125.7	1,843	913.8		148.2
1953:					
March	125.7		989.0		160.4
June	130.2		978.0		158.7
September	134.6		947.0		153.6
December	134.6		871.0		141.3
1954:					
March	130.1		771.0		125.1
June	129.9		860.0		139.5
September	133.9		661.0		107.2
December	133.9		1,124.0		183.3
1955:					
March	133.7		1,292.0		209.6
June	133.7		1,312.0		212.8
September	142.3		1,262.0		204.7
December	141.7		1,395.0		226.3
1956:					
March	141.7		1,327.0		215.3
June	141.7		1,277.0		207.2
September	151.4		1,046.0		169.7
December	151.4		1,130.0		183.3
1957:					
March	154.8		[5] 1,026.0		166.5
June	154.8		984.0		159.6
September (average)	161.6		900.0		146.0

[1] Bureau of Labor Statistics Wholesale Price Series, Finished Steel Products (Code 10-14-47).

[2] Department of Commerce, Business Statistics, 1951, 1953, and 1955 and Survey of Current Business. Data for 1947–52 inclusive represent estimates based on yearly division of shipments of all sheets as between hot-rolled and cold-rolled sheets, taken from annual statistics, American Iron & Steel Institute, 1950 and 1956 editions.

[3] Index of shipments is based on average monthly shipments for the 36-month 1947–49 base period (1947–49 average noted at column head).

[4] Strike.

[5] Enameling sheets omitted.

Cold-rolled strip—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 135) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 135) [3]
1937	84.9	68.0	50.4	1951—March	125.9	189.0	140.0
1938	82.5	36.0	26.7	June	125.9	180.0	133.4
1939	77.1	56.0	41.5	September	125.9	162.0	120.4
1940	75.4	66.0	48.9	December	125.9	154.0	114.1
1941	75.7	110.0	81.5	1952—March	125.9	156.0	115.6
1942	75.7	79.0	58.5	June	125.9	62.0	45.9
1943	75.7	96.0	71.1	September	138.1	156.0	115.6
1944	75.7	99.0	73.4	December	138.1	179.0	132.6
1945—March	75.7	121.0	89.7	1953—March	138.1	205.0	151.9
June	75.7	111.0	82.2	June	147.0	190.0	140.7
September	75.7	84.0	62.2	September	152.7	191.0	141.5
December	75.7	104.0	77.1	December	150.1	140.0	103.7
1946—March	82.5	106.0	78.5	1954—March	150.1	112.0	83.0
June	82.5	108.0	80.0	June	149.8	107.0	79.3
September	82.5	115.0	85.2	September	155.6	110.0	81.5
December	85.6	123.0	91.1	December	155.6	128.0	94.8
1947—March	86.6	132.0	97.8	1955—March	155.3	153.0	113.3
June	86.6	138.0	102.2	June	155.3	152.0	112.6
September	96.1	136.0	100.7	September	165.6	148.0	109.6
December	96.1	134.0	99.3	December	167.7	163.0	120.7
1948—March	96.1	158.0	117.0	1956—March	170.8	[4] 156.0	115.6
June	93.4	152.0	112.6	June	170.8	[4] 149.6	110.8
September	108.3	150.0	111.1	September	183.2	[4] 126.2	93.9
December	108.3	155.0	114.8	December	183.2	[4] 135.8	100.6
1949—March	108.3	170.0	126.0	1957—March	183.2	[4] 123.4	91.4
June	108.3	121.0	89.7	June	183.2	[4] 120.3	89.1
September	108.3	122.0	90.4	September (average)	191.5	[4] 101.6	75.3
December	110.3	137.0	101.5				
1950—March	112.4	151.0	111.9				
June	112.4	157.0	116.3				
September	112.4	159.0	117.8				
December	125.9	178.0	131.9				

[1] Bureau of Labor Statistics Wholesale Price Series, Cold-Rolled Strip, Carbon (Code 10–14–51). Prior to July 1948 on basing-point basis and thereafter on f. o. b. mill or shipping point basis. Data prior to 1947 represent 1935–39 base period index converted to 1947–49 base by using overlap and reciprocal.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from shipment tonnage data using average for 30-month 1947–49 period noted in column head as the base.

[4] Indicates estimates necessitated by a revision of grouping of tonnage data in survey. A 1955 relationship between cold-rolled strip and "sheet and strip" was used to compute these figures (cold-rolled strip was an average 5.362 percent of sheet and strip during the 1955 overlap period.)

Structural shapes—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 343.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 343.66) [3]
1937	71.1	232.0	67.5	1951—March	128.4	452.0	131.5
1938	67.5	129.0	37.5	June	128.4	409.0	119.0
1939	67.5	212.0	61.7	September	128.4	386.0	112.3
1940	67.5	262.0	76.2	December	128.4	409.0	119.0
1941	67.5	382.0	111.2	1952—March	128.4	431.0	125.6
1942	67.5	411.0	119.6	June	128.4	36.0	10.5
1943	67.5	323.0	94.0	September	134.9	386.0	112.3
1944	67.5	320.0	93.1	December	134.9	422.0	122.8
1945—March	67.5	296.0	86.1	1953—March	134.9	416.0	121.0
June	67.5	297.0	86.4	June	133.8	397.0	115.5
September	67.5	272.0	79.1	September	141.9	393.0	114.4
December	67.5	331.0	96.3	December	141.9	481.0	140.0
1946—March	75.5	327.0	95.2	1954—March	141.3	437.0	127.2
June	75.5	274.0	79.7	June	141.3	373.0	108.5
September	75.5	347.0	101.0	September	146.2	346.0	100.7
December	75.5	310.0	90.2	December	146.2	347.0	101.0
1947—March	80.3	390.0	113.5	1955—March	146.2	407.0	118.4
June	80.3	364.0	105.9	June	146.2	378.0	110.0
September	89.9	360.0	104.7	September	157.5	426.0	124.0
December	89.9	380.0	110.5	December	157.5	449.0	130.7
1948—March	97.9	382.0	111.0	1956—March	157.5	[4] 484.9	141.1
June	96.3	372.0	108.2	June	157.5	[4] 496.8	144.6
September	112.4	334.0	97.2	September	170.5	[4] 501.5	145.9
December	112.4	394.0	114.6	December	170.5	[4] 520.9	151.6
1949—March	112.4	394.0	114.6	1957—March	183.4	[4] 606.9	176.6
June	112.4	327.0	95.1	June	183.4	[4] 581.8	169.3
September	112.4	309.0	89.8	September (average)	192.3	[4] 588.5	171.2
December	116.4	341.0	99.2				
1950—March	120.4	331.0	96.3				
June	120.4	361.0	105.0				
September	120.4	355.0	103.2				
December	128.4	365.0	106.2				

[1] Bureau of Labor Statistics Wholesale Price Series, Structural Shapes, (Code 10–14–31). Data up to 1947 represent old base 1935–39 converted to 1947–49 base by using overlap reciprocal of 0.64676.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from data on short tons shipped by using as a base the monthly average for the 36-month 1947–49 period rated at column head.

[4] Indicates estimates necessitated by a revision of data grouping in the survey which resulted in steel piling being included in with structural shapes. Using overlap covering 1955, it was found that structural shapes accounted for an average of 92.357 percent of the combined structural shapes and piling and this percentage was applied to 1956 and 1957 data to get the above figures.

Plates—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 530.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 530.66) [3]
1937	69.1	281	53.0	1951—March	123.0	681	128.3
1938	67.5	135	25.4	June	123.0	685	129.0
1939	65.3	233	43.9	September	123.0	657	123.8
1940	65.3	348	65.6	December	123.0	708	133.4
1941	65.3	499	94.1	1952—March	123.0	784	147.7
1942	65.3	953	179.6	June	123.0	110	20.7
1943	65.3	1,077	203.0	September	129.2	649	122.3
1944	65.3	1,020	192.2	December	129.2	720	135.7
1945—March	68.4	736	138.7	1953—March	129.2	707	133.2
June	70.0	572	107.8	June	133.8	614	115.7
September	70.0	389	73.3	September	139.9	586	110.4
December	70.0	387	72.9	December	139.9	633	119.3
1946—March	[4] 77.8	371	69.9	1954—March	139.9	544	102.5
June	77.8	284	53.5	June	139.9	421	79.3
September	77.8	397	74.8	September	143.8	379	71.4
December	77.8	386	72.8	December	143.8	421	79.3
1947—March	[4] 86.8	527	99.3	1955—March	143.8	543	102.3
June	85.6	563	106.1	June	143.8	600	113.1
September	94.9	495	93.3	September	152.2	619	116.7
December	94.9	591	111.4	December	152.2	678	127.8
1948—March	94.9	630	118.7	1956—March	159.9	707	133.2
June	93.4	592	111.6	June	159.9	754	142.1
September	109.0	572	107.8	September	170.7	747	140.8
December	109.0	658	124.0	December	170.7	607	114.4
1949—March	109.0	684	128.9	1957—March	181.4	881	166.0
June	109.0	517	97.4	June	181.4	870	164.0
September	109.0	467	88.0	September (average)	189.1	732	137.9
December	112.8	519	97.8				
1950—March	116.7	441	83.1				
June	116.7	447	84.2				
September	116.7	482	90.8				
December	123.6	551	103.8				

[1] Bureau of Labor Statistics Wholesale Price Series, Plates, Carbon (Code 10-14-26). Prior to July 1948 on basing-point basis and thereafter on f. o. b. mill or shipping-point basis. Data prior to 1947 represents 1935–39 base data converted to 1947–49 base by using overlap and reciprocal.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from tonnage shipments data using monthly average for 36-month period 1947–49 noted at column head as the base.

[4] New series.

Rails—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 180.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 180.66) [3]
1937	64.1	132	73.0	1951—March	123.5	160	88.6
1938	64.0	57	31.6	June	123.5	161	89.1
1939	61.2	107	59.2	September	123.5	139	76.9
1940	61.2	137	75.8	December	123.5	146	80.8
1941	61.2	159	88.0	1952—March	123.5	162.0	89.7
1942	61.2	173	95.8	June	123.5	11.0	6.1
1943	61.2	176	97.4	September	129.5	148.0	81.9
1944	61.2	207	114.6	December	129.5	153.0	84.7
1945—March	65.8	212	117.4	1953—March	129.5	168.0	93.0
June	65.8	181	100.2	June	140.2	162.0	89.7
September	65.8	220	121.8	September	148.9	162.0	89.7
December	65.8	204	112.9	December	148.9	185.0	102.4
1946—March	74.4	177	98.0	1954—March	148.9	166.0	91.9
June	74.4	133	73.6	June	148.9	108.0	59.8
September	74.4	199	110.2	September	153.2	63.0	34.9
December	[4] 81.2	174	96.3	December	153.2	40.0	22.1
1947—March	85.7	181	100.2	1955—March	153.2	122.0	67.5
June	85.7	205	113.5	June	153.2	127.0	70.3
September	94.3	182	100.7	September	162.5	95.0	52.6
December	94.3	211	116.8	December	162.5	98.0	54.2
1948—March	94.3	206	114.0	1956—March	162.5	[5] 137.6	76.2
June	92.6	189	104.6	June	162.5	[5] 107.4	59.5
September	109.7	184	101.9	September	174.3	[5] 112.0	62.0
December	109.7	190	105.2	December	174.3	[5] 113.8	63.0
1949—March	109.7	207	114.6	1957—March	181.1	[5] 124.1	68.7
June	109.7	211	116.9	June	181.1	[5] 130.7	72.3
September	109.7	162	89.7	September (average)	189.5	[5] 100.6	55.7
December	113.2	141	78.0				
1950—March	116.6	125	69.2				
June	116.6	186	103.0				
September	116.6	154	85.2				
December	123.5	140	77.5				

[1] Bureau of Labor Statistics Wholesale Price Series, "Rails, Standard" (code 10–14–01).

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from shipments data in short tons by using the monthly average noted at column head for the 36-month 1947–49 period as a base.

[4] Indicates a new series rather than price change. Data prices to 1947 represent an old series on a 1935–39 base converted to a 1947–49 base by an overlap reciprocal of 0.60224.

[5] Indicates estimates necessitated by a revision of data grouping in the survey which resulted in "accessories" being added to "rails" to form the aggregate "rails and accessories." Using an overlap of 1955 it was found that rails represented, on the average, 57.833 percent of rails and accessories and this percentage was applied to the aggregates given in 1956 and 1957 to get the above figures.

Pipe and tube—Trend of price and production, 1937–57

[1947–49=100]

Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 553.66) [3]	Year and month	Price index [1]	Production (in thousands of short tons) [2]	Production index (average 553.66) [3]
1937	73.3	328	59.2	1951—March	122.9	824	148.8
1938	71.1	201	36.3	June	122.9	770	139.0
1939	67.1	292	52.7	September	122.9	719	129.9
1940	67.1	330	59.5	December	122.9	777	140.3
1941	67.1	473	85.4	1952—March	122.9	872	157.4
1942	67.1	423	76.4	June	122.9	182	32.9
1943	67.1	489	88.8	September	129.9	797	144.0
1944	67.1	511	92.3	December	129.9	857	154.8
1945—March	67.1	578	104.4	1953—March	129.9	902	162.9
June	67.1	531	95.9	June	133.5	847	153.0
September	67.1	429	77.5	September	138.8	833	150.5
December	67.1	417	75.3	December	138.8	714	129.0
1946—March	73.1	418	75.5	1954—March	138.8	748	135.1
June	73.1	334	60.3	June	138.8	786	142.0
September	73.1	446	80.6	September	144.0	694	125.3
December	75.1	418	75.5	December	144.0	497	89.8
1947—March	83.1	502	90.6	1955—March	144.0	795	143.6
June	83.1	527	95.2	June	144.0	967	174.7
September	93.1	497	89.8	September	157.1	873	157.7
December	93.1	558	100.8	December	158.4	885	159.8
1948—March	100.1	613	110.7	1956—March	163.2	952	171.9
June	98.0	565	102.0	June	163.2	1,000	180.6
September	108.1	583	105.3	September	176.5	831	150.1
December	110.1	637	115.0	December	176.5	915	165.3
1949—March	110.1	721	130.2	1957—March	181.4	1,034	186.8
June	110.1	623	112.5	June	181.4	989	180.3
September	110.1	655	118.3	September (average)	190.3	914	165.1
December	112.5	653	117.9				
1950—March	115.1	658	118.8				
June	115.1	807	145.7				
September	115.1	770	139.0				
December	122.9	717	129.5				

[1] Bureau of Labor Statistics Wholesale Price Series, Pipe, standard, carbon (Code 10–14–56) on basing point prior to 1948 and f. o. b. mill or shipping point thereafter. Invoices prior to 1947 represent old 1935–39 data converters to 1947–49 base through reciprocal of 0.69949.

[2] Department of Commerce, Business Statistics, 1951, 1953, 1955, and Survey of Current Business.

[3] Computed from tonnage data is based on monthly average (noted at column head) for 36-month 1947–49 period.

Iron ore—Trend of price and production, 1937–57

Year and month	Price per gross ton [1]	Production (all districts) (in thousands of long tons) [2]	Year and month	Price per gross ton [1]	Production (all districts) (in thousands of long tons) [2]
1937	4.872	6,008	1951—March	8.30	3,535
1938	4.95	2,371	June	8.30	14,902
1939	4.95	4,311	September	8.30	14,764
1940	4.60	6,141	December	8.30	3,682
1941	4.45	7,701	1952—March	8.30	3,714
1942	4.45	8,794	June	8.30	1,552
1943	4.45	8,437	September	9.05	15,912
1944	4.45	7,843	December	9.15	3,269
1945—March	4.45	3,127	1953—March	9.05	4,113
June	4.45	11,460	June	9.75	15,368
September	4.45	10,702	September	9.90	15,143
December	4.45	1,952	December	9.90	3,183
1946—March	4.55	1,096	1954—March	9.90	3,117
June	4.675	8,850	June	9.90	11,610
September	5.05	10,742	September	9.90	8,913
December	5.05	2,274	December	9.90	2,907
1947—March	5.55	2,846	1955—March	10.1	3,227
June	5.55	11,643	June	10.1	13,704
September	5.55	11,336	September	10.1	13,830
December	5.55	2,972	December	10.1	3,502
1948—March	5.68	3,019	1956—March	10.85	3,640
June	6.20	12,578	June	10.85	13,233
September	6.20	11,942	September	10.85	13,404
December	6.20	3,675	December	10.85	4,837
1949—March	7.20	4,335	1957—March	11.40	3,717
June	7.20	12,923	June	11.45	14,440
September	7.20	10,164	September	11.45	.....
December	7.20	2,816			
1950—March	7.70	2,496			
June	7.70	12,355			
September	7.70	13,887			
December	8.30	3,362			

[1] Bureau of Labor Statistics Wholesale Price Series, Iron ore, nonbessemer (Code 10-11-06).
[2] Department of Commerce, Business Statistics 1949, 1951, 1955, and Survey of Current Business.

Ferromanganese ore (imports)—Trend of price and production, 1937–57

Year and month	Price (in cents per pound) [1]	Production (imports) (in thousands of long tons) [2]	Year and month	Price (in cents per pound) [1]	Production (imports) (in thousands of long tons) [2]
1937	[3] 4.33	38.7	1951—March	8.1	81
1938	3.868	20.2	June	8.1	84
1939	3.868	26.8	September	8.1	71
1940	4.919	52.3	December	8.1	65
1941	5.357	61.4	1952—March	8.10	73
1942	5.808	57.1	June	8.10	47
1943	6.027	54.5	September	9.81	64
1944	6.027	47.1	December	9.81	157
1945—March	6.027	28.9	1953—March	9.81	96
June	6.027	46.0	June	[5] 10.00	134
September	6.027	56.4	September	10.00	90
December	6.027	50.9	December	10.00	108
1946—March	6.027	62.7	1954—March	10.00	74
June	6.027	33.5	June	10.00	83
September	6.027	70.5	September	9.40	71
December	6.027	54.7	December	9.50	59
1947—March	5.863	32.3	1955—March	9.50	87
June	5.863	38.0	June	9.50	72
September	5.863	44.9	September	9.50	90
December	6.297	24.6	December	9.90	134
1948—March	6.297	67.7	1956—March	10.30	72
June	6.297	61.9	June	10.80	89
September	6.297	38.3	September	11.40	65
December	[4] 6.921	58.0	December	11.80	96
1949—March	7.112	48.1	1957—March	12.80	90
June	7.421	60.2	June	12.8	108
September	7.421	49.3	September	12.8	98
December	7.421	79.7	December		
1950—March	7.421	60.5			
June	7.421	106.6			
September	7.421	69.6			
December	7.9	87.8			

[1] Bureau of Labor Statistics wholesale price series, "Ferromanganese ore" (code 10-16-11).
[2] Department of Commerce, Business Statistics, 1949, 1951, 1955, and Survey of Current Business. Data represent imports for consummation.
[3] Date prior to 1947 quoted on dollars-per-ton basis—converted here cents per pound to make series continuous.
[4] New series.
[5] New series—changed specification from 74 to 78 percent manganese content to 78 to 82 percent.

NEWS RELEASE

(For release morning newspapers, Tuesday, October 29, 1957)

NATIONAL STEEL CORP., PITTSBURGH, PA.

PITTSBURGH, October 29.—National Steel Corp. reports net earnings for the quarter ended September 30, 1957, of $8,041,074, equal to $1.08 per share. For the first 9 months of 1957, earnings were $34,149,921, equal to $4.60 per share.

Sales were $149,717,037 in the third quarter and $493,065,495 in the 9-month period.

Thomas E. Millsop, president of National Steel Corp. pointed out that financial results were adversely affected by an illegal strike in August which caused a 2-week stoppage of operations at the plants of National's Detroit division, Great Lakes Steel Corp., and also by the interruption of production at the same division resulting from the rebuilding of reheating furnaces serving the 96-inch continuous hot strip mill. This work is now virtually completed, he said.

Provisions for depreciation, depletion, and amortization of $12,371,333 for the third quarter and $35,380,071 for the first 9 months of 1957 represent increases of more than $1 million and $3,500,000, respectively, over provisions in the comparable periods of 1956.

Mr. Millsop stated that operations in the third quarter of 1957 were at the rate of 80.5 percent of capacity, resulting in the production of 1,258,562 tons of ingots. Operations are currently in excess of 80 percent, Mr. Millsop said.

Net earnings for the comparable periods of 1956 were $6,514,649 in the third quarter, equal to 88 cents per share, and $35,476,059 in the first 9 months, equal to $4.80 per share. Financial results of these periods were affected by the 34-day general strike in the steel industry last year. Sales in 1956 were $133,345,718 in the third quarter and $480,985,383 in the first 9 months.

The consolidated income summary follows:

National Steel Corp. consolidated income summary

	Quarter ended Sept. 30, 1957	9 months ended Sept. 30, 1957	Quarter ended Sept. 30, 1956	9 months ended Sept. 30, 1956
Sales and operating revenue	$149,717,037.00	$493,065,495.00	$133,345,718.00	$480,985,383.00
Income from operations and income from interest and dividends after deducting cost of sales, selling, and general expenses and all other expenses except those shown separately below	28,245,472.00	104,079,187.00	23,891,089.00	103,945,429.00
Provision for depreciation, depletion, and amortization	12,371,333.00	35,380,071.00	11,286,502.00	31,849,922.00
Total	15,874,139.00	68,699,116.00	12,604,587.00	72,095,507.00
Interest, bond discount, and expense	983,065.00	2,949,195.00	439,938.00	1,319,448.00
Total	14,891,074.00	65,749,921.00	12,164,649.00	70,776,059.00
Provision for Federal taxes on income	6,850,000.00	31,600,000.00	5,650,000.00	35,300,000.00
Net income	8,041,074.00	34,149,921.00	6,514,649.00	35,476,059.00
Net income per share	1.08	4.60	.88	4.80

NOTE.—This report being for an interim period, the results are subject to annual audit and any necessary year-end adjustments relating to inventories, reserves, etc.

STATEMENT OF MR. E. J. HANLEY, PRESIDENT OF ALLEGHENY LUDLUM STEEL CORP.

This statement is furnished in response to the request of the Antitrust and Monopoly Subcommittee, through Paul Rand Dixon, Esq., its counsel and staff director, to Allegheny Ludlum Steel Corp., to furnish the committee a statement outlining its experience with the continuous casting process and setting forth its reaction to and future plans for the use of the process and its opinion as to the use of continuous casting for the steel industry generally.

In 1948 Allegheny Ludlum Steel Corp. became interested in the application of the continuous casting process, particularly the so-called Rossi-Junghans process, in the specialty steel field. The process had been used commercially for the continuous casting of certain nonferrous metals, such as brass and copper. The

potential savings from the use of the process, through the elimination of high-cost facilities and increased yield from molten metal to finished mill products, aroused our interest and gave rise to our experimentation with the process.

After a study of the process and the adaptation thereof for use in the continuous casting of steel, in 1949 we began the construction of facilities at our Watervliet plant, near Albany, N. Y., designed for the continuous casting of steel on an experimental basis. For a period of about 5 years from the completion of the facilities in 1949 we made many experiments in the casting of various types of steel. As our products consist principally of stainless steel, electrical steel and electrical alloys, tool steel, high-temperature steel and other high-alloy specialty steels, our interest and experimentation were concerned primarily with the continuous casting of high-alloy steels, but experiments also were conducted by us, and with our permission by others, in connection with the casting of other grades of steel.

I shall not discuss in detail the many technical problems which confronted us in adapting the process to the casting of steel. Many of them arose from the fact that steels generally have much higher melting points than the other metals for which the process was in commercial use. We feel that we overcame most of the difficulties and we were successful in continuously casting, on an experimental basis, a number of different types of steels into slabs and bars of various dimensions.

By 1955, we had expended substantial amounts of money and had devoted a great deal of time to the experiments. Having established that various types of steel could be continuously cast into commercially acceptable products, we concluded that in order to obtain further experience, the installation of commercial, rather than pilot or experimental, facilities was desirable and we decided to dismantle the experimental facilities. At that time our plants were adequately equipped with blooming facilities, as they now are, so we did not proceed to install, and have no present plans to install, facilities for the continuous casting of steel on a commercial scale.

Our experience with the continuous casting process has led us to believe that it has commercial possibilities in the steel field and one steel company in Canada is using the process in commercial production. As Allegheny Ludlum is not one of the large-volume carbon steel producers I would not presume to say whether in that industry continuous casting will ultimately replace the blooming mill method of reducing ingots. That question must necessarily depend upon a number of factors, both technical and economic, particularly the cost per ton of production. Whether the higher installation cost of blooming facilities will be more than offset by their greater volume of production has not been tested commercially, and many depend in part upon the nature of the business of the particular producer. The process is worthy of serious consideration for any steel company contemplating the installation of blooming facilities.

E. J. HANLEY.

Steel Prices, Profits, Productivity, and Wages

by JULES BACKMAN

Professor of Economics

NEW YORK UNIVERSITY

JULES BACKMAN
59 CRANE ROAD
SCARSDALE, NEW YORK

April 22, 1957

Mr. Robert C. Tyson
Chairman of Finance Committee
United States Steel Corporation
71 Broadway
New York 6, New York

Dear Mr. Tyson:

In accordance with your request, I have examined the two documents prepared by the United Steelworkers of America:

1. Steel in the National Economy 1956
2. Facts On Steel: Profits, Productivity, Prices and Wages 1956

Attached are my findings. You will note that I have analyzed the main arguments and supporting data rather than attempting to make a line by line evaluation of the reports. I trust you will find this report of some value.

Sincerely yours,

Jules Backman

Jules Backman

JB:ew

Table of Contents

PAGE

SUMMARY AND CONCLUSIONS ix

I. SELECTION OF BASE PERIODS 1
The Use of 1939 as a Base Period 1
The Use of 1947 as a Base Period 3

II. FINISHED STEEL PRICES AND THE GENERAL PRICE LEVEL 4
Relative Importance of Steel in the National Economy 9

III. COST-PRICE RELATIONSHIPS 10
Steel Materials Costs Have Risen More Than Finished Steel Prices 10
Raw Material Cost Increases Parallel Those in Employment Costs 15

IV. STEEL PRODUCTIVITY AND WAGES 18
Steel Real Wages and Steel Output Per Manhour—a Meaningless Comparison 24
Steelworkers' Real Wages Have Risen More Than National Productivity 25
Rise in Steel Output Per Manhour Is Not Accelerating 27
Reported Rate of Increase in Output Per Manhour Is Overstated for Steel Industry 29

V. STEEL PRICE INCREASES AND WAGE INCREASES 31
Price Rise to Cover Only Direct Steel Labor Costs 32
Price Rise Required to Break Even in 1955 32
Price Rise Required If Steel Profit Margin Had Declined as Much as That for All Manufacturing Industries 33
Price Rise Required If Steel Profit Margin in 1955 Remained the Same as in 1947 33

VI. DISTRIBUTION OF THE STEEL SALES DOLLAR 35
Employment Costs 36
Product and Service Costs 37
Profits Before Taxes 39
Profits After Taxes 40
Dividends to Steel Stockholders 42
Dividends: Steel Companies and All Corporations 42

PAGE

VII. Profit Margins and Price Policies in Other Industries 45
There Is No Combined Manufacturing Price Policy 46
Other Industries Also Have Maintained or Increased Profit Margins Since 1947 52
Some Industries Have Higher Profit Margins Than Steel 52
Other Factors Affecting Trend of Profit Margins 54

VIII. Steel Profits in Economic Perspective 55
Inadequacy of Depreciation Allowances Creates Phantom Profits 55
Measuring Capital Consumption 56
Accelerated Amortization Does Not Provide Full Offset to Under-depreciation 61
Higher Replacement Costs 62
Inadequacies of Net Worth-Profit Comparisons 66
How Inflation Impairs Net Worth Comparisons 67
Return on Net Assets: Steel and Other Manufacturing Industries 71
The Level of Steel Profits 73

IX. Financing Expansion 78
Sources of Financing for American Industry 79
Illustrations of Major Reliance Upon Internal Financing 82
Sources of Steel Industry Financing 85
The Concept of "Costless Capital" 89

Appendix A:
American Iron and Steel Institute Income Statement for the Steel Industry 92

Appendix B:
What the Authorities Say About Financing Expansion 94

Tables

TABLE NO.		PAGE
1.	Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, 1939-December 1956	4
2.	Year to Year Per Cent Changes in Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, 1939-December 1956	6
3.	Changes in Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, Selected Dates, 1939-1956	8
4.	Per Cent Change in Raw Material and Fuel Prices—United States Steel Corp., 1939, 1947-49, March 31, 1956, December 31, 1956	13
5.	Year to Year Changes in Employment Costs and Costs of Products and Services Bought, The Steel Industry—1939 to 1956	15
6.	Year to Year Changes in Employment Costs and Costs of Products and Services Bought, United States Steel Corp.—1939 to 1956	16
7.	Output Per Manhour, Average Hourly Earnings, and Total Employment Costs, Basic Steel Industry, by Years, 1939-1956	20
8.	Per Cent Increase to 1956 from Preceding Years for Output Per Manhour, Average Hourly Earnings, and Total Employment Costs, Basic Steel Industry	22
9.	Changes in Unit Labor Costs, Basic Steel Industry, by Years, 1939-1956	22
10.	Real Private Non-Farm Product Per Manhour, Real Average Hourly Earnings and Real Employment Costs for the Basic Steel Industry, by Years, 1939-1956	27
11.	Per Cent Increase to 1956 from Preceding Years for Real Private Non-Farm Product Per Manhour, and Real Average Hourly Earnings and Real Employment Costs for the Basic Steel Industry	28
12.	Steel Industry: Employment Costs, Products and Services, Profits Before and After Taxes as Per Cent of the Sales Dollar, and Operating Rates, 1939-1956	35

TABLE NO. PAGE

13. Employment Costs, Products and Services Bought, Profits Before and After Taxes as Per Cent of Sales Dollar, and Operating Rates, United States Steel Corporation, 1939-1956 ... 37
14. Dividends as Per Cent of Sales Dollar, 1939-1956 ... 43
15. Per Cent Changes in the Major Components of the Wholesale Price Index, 1939 to 1947 ... 45
16. Changes in Profits After Taxes to Sales, by Industry Group, 1947 and First Quarter of 1956 ... 47
17. Per Cent Relationship of Corporate Profits Before and After Taxes to Sales in Manufacturing Industries, 1947 and 1953 48
18. Margin on Sales, Return on Net Worth and Turnover Ratios of Major Manufacturing Groups in 1955 ... 49
19. Margin on Sales, Return on Net Worth and Turnover Ratios of Major Nonmanufacturing Groups in 1955 ... 50
20. Depreciation on Privately Owned Structures and Equipment in Manufacturing Establishments, 1929-1955 ... 58
21. Changes in Prices of Producers' Finished Goods, Non-Farm—Non-Food Commodities and Construction Costs, 1939-1956 ... 65
22. Returns on Net Assets for All Manufacturing Industries and the Iron and Steel Industry, 1925-1956 (After Taxes) ... 72
23. Sources of Corporate Funds, 1946-1956 ... 79
24. Gross Proceeds of Corporate Securities Offered for Cash—1934-1956 ... 80
25. Per Cent Distribution of Gross Proceeds of Offerings of Corporate Securities, 1934-1956 ... 82
26. New Stock Issues of Public Utility and Communication Companies in Relation to All Corporations, 1939-1955 ... 83
27. Methods of Financing Expansion—Seventy-Two Companies, 1922-1930 ... 83
28. Total Stocks and Bonds Sold, 16 Steel Companies, 1946-1956 ... 86
29. Sales of Bonds and Stocks, 16 Steel Companies, 1946-1956 ... 87

Charts

CHART NO.		PAGE
1.	Consumer, Wholesale and Finished Steel Price Indexes	5
2.	Consumer, Wholesale and Finished Steel Prices, Per Cent Change	7
3.	Per Cent Increase in Raw Materials and Fuel Costs and Finished Steel Prices, Selected Periods, January 1, 1939-March 31, 1956	12
4.	Total Employment Costs and Products and Services Bought, 1939-1956	14
5.	Output Per Manhour, Hourly Earnings, and Employment Costs Per Manhour	19
6.	Per Cent Increase in Steel Industry Output Per Manhour and Employment Costs Per Manhour, Selected Periods, 1940-1956	21
7.	Changes in Unit Labor Costs, 1939-1956	23
8.	Real Private Non-Farm Product Per Manhour, Steelworkers' Real Average Hourly Earnings, Steelworkers' Real Employment Costs Per Manhour, Per Cent Change, 1940-41 to 1956	26
9.	Employment Costs as a Per Cent of the Sales Dollar	36
10.	Products and Services Bought as a Per Cent of the Sales Dollar	38
11.	Profits Before Taxes as a Per Cent of the Sales Dollar	40
12.	Profits After Taxes as a Per Cent of the Sales Dollar	41
13.	Per Cent Increase in Major Components of Wholesale Price Index, From 1939 to 1947	46
14.	Relation of Turnover Ratio to Per Cent Margin on Sales in Manufacturing Industries, 1955	51
15.	Profit Margin as Per Cent of Sales—Major Manufacturing Industries, 1955	53
16.	Manufacturing Depreciation, Ratio of Current Year Cost to Original Cost	61
17.	Wear and Exhaustion Recorded vs. Wear and Exhaustion Needed	63
18.	Sources of Corporate Funds, 1946-1956	78
19.	New Corporate Securities Issues, Distribution by Types of Securities, 1934-1956	81

Summary and Conclusions

Steel Price Increases Have Not Caused Inflation

1. The steel industry, during the war and postwar period, has been much more a victim than a cause of inflation. This fact is clearly revealed by an examination of the diverse trends of general prices, steel prices, and steel costs during the past eighteen years. During this period, steel material costs have risen faster than steel prices. Steel labor costs have risen substantially more than steel output per manhour.

Steel Price Increases Have Little Effect on General Prices

2. Depending on the basis used for comparison, the steel industry accounts for 2.5 per cent to 4.7 per cent of the national economy. The steel industry is a giant industry. But it is only one of many giant industries in a giant economy. The use of absolute dollar totals running into billions of dollars naturally creates an illusion of impact which far exceeds the actuality. It is only when the $14 billion steel industry is measured against the $400 billion economy that a proper picture is obtained of its relative significance.

3. Changes in steel prices undoubtedly affect very significant areas of the economy. However, they do not determine changes in the general level of wholesale prices or in the cost of living.

4. The accepted measure of the impact of inflation upon the individual is the consumer price index. Because steel accounts for a relatively small part of final product costs for many important products, changes in steel prices can have only a minor effect upon the consumer price index.

5. Consumer prices have repeatedly moved quite independently of steel prices. From 1940 to 1944, finished steel prices failed to increase by as much as 1 per cent in any year. Yet during that same period, the consumer price index rose as much as 10.8 per cent in 1942 alone. In 1946, steel prices rose about as much as the consumer price index, but in 1949 steel prices rose while consumer prices declined. In 1953-1955, the annual increases in steel prices ranged between 4.3 and 7.6 per cent while the consumer price index remained about unchanged. From 1955 to 1956, consumer prices rose only 1.5 per cent while steel prices rose 8.4 per cent. Clearly, there is little causal relationship between steel prices and the cost of living in this record.

6. There was also no relationship between changes in steel prices and the wholesale price index for the various periods between 1939 and 1956. The record of diversity between changes in steel prices and the wholesale price index is

similar. For the period 1939 to August 1945, steel prices rose only 3.8 per cent while wholesale prices rose 37.1 per cent. From 1939 to 1956, steel prices rose 138.4 per cent or only slightly more than wholesale prices—up 128.1 per cent.

Steel Costs for Purchased Products and Services Have Risen Substantially More Than Steel Prices

7. There has been a major rise in the cost of materials bought by the steel industry. This increase in material costs has contributed to the pressure for higher prices for finished steel during the war and postwar years. To a large extent, increases in raw material prices have reflected the rise in labor costs. This is particularly evident in connection with such key products as coal and iron ore.

8. In the 1947-49 period, United States Steel paid an average of 106.7 per cent more for raw materials than it did in 1939. If petroleum, oxygen, gas, and electricity are included in the total, then the combined rise in raw material and fuel costs was 85.4 per cent between 1939 and 1947-49. During the same period, the Bureau of Labor Statistics index of finished steel prices rose only 47.1 per cent. Taking the longer period, from 1939 to the end of 1956, the rise in raw material costs and fuels was 169.1 per cent compared with a rise of 148.2 per cent in finished steel prices. As a result, the share of the steel industry sales dollar spent for products and services has risen from 44.3 per cent in 1939 to 45.8 per cent in 1956. For United States Steel the rise has been from 34.7 per cent to 35.2 per cent.

Steel Labor Costs Have Risen Substantially More Than Steel Output Per Manhour

9. Steel productivity has been increasing at a slower rate in recent years than before 1940.

10. Between 1940 and 1956, steel industry average hourly earnings rose by 201.2 per cent and average hourly earnings plus pensions and welfare fund costs rose by 211.2 per cent in contrast to steel productivity which increased only 56.3 per cent. Between 1947 and 1956, average hourly earnings rose 75.7 per cent and total employment costs by 85.9 per cent while steel productivity increased only 28.2 per cent.

11. The result has been a sharp rise in unit labor costs which doubled during the war and postwar years with the consequent pressure for higher prices. Between 1952 and 1956, the increase in unit labor costs was 16.9 per cent. Clearly, increases in labor costs in recent years could not have been absorbed out of increases in productivity. On the contrary, labor costs have outstripped productivity by such a wide margin that there has been considerable pressure for price increases.

Real Steel Wages Have Risen More Than National Productivity

12. Increases in steelworkers' real income have been much greater than in national productivity since 1940-1941. The rise in national productivity has been 35.5 per cent as compared with 55.6 per cent for steelworkers' real income. Regardless of which year since 1940-41 is used as a basis for comparison, steelworkers' wages have outstripped national productivity gains.

Increases in Steel Labor Costs Cannot Be Paid Out of Profits Without Price Increases

13. It is sometimes stated that higher steel labor costs could easily be paid out of steel profits without any increase in prices. This charge ignores the fact that labor costs have risen much more sharply than productivity. In addition, for the steel industry, costs of products and services have increased $1.43 for every $1 increase in labor costs for the period 1939-56. For United States Steel, the increases in both types of costs have been almost equal.

14. Employment and raw materials costs have moved in the same direction in *every year* since 1939 both for United States Steel and the steel industry. While the magnitude of the changes for both types of costs have not been precisely the same in each year, they have been of similar magnitude in many years and have tended to have closer relationships over a two or three year period.

15. Clearly, any claim that wage increases could have been paid out of profits without an increase in prices is without foundation in fact.

If, since 1945, steel prices had risen only enough to cover the additional direct labor costs incurred in producing finished steel, the steel industry would have experienced a loss in excess of two billion dollars in 1955.

If prices had risen only enough to permit the industry to break even in 1955, a price rise of 86.0 per cent since 1945 would have been required. This would have been more than seven tenths of the actual rise—and the industry would still have had no profits.

Even if the steel industry had maintained its 1947 profits ratio, the price rise would have had to be 113.1 per cent or only 3.4 per cent lower than the level which actually prevailed.

16. Wage costs are an important element in total costs in the steel industry and changes in total costs are considered when making price adjustments. However, other factors also have been important. Among those which may be cited are: the desire to earn a fair return on investment, the need for funds for expansion, strong demand for steel which is reflected in the ability of customers to pay higher prices, and changes in the prices of substitute products. Changes

in wages certainly may influence the *timing* of price changes—but not their magnitude.

Steel Industry Profit Ratios Are Not High Relative to the Sales Dollar

17. The steel industry earned 7.8 cents on each dollar of sales in 1955, compared with 6.7 cents for all manufacturing industries. However, ten other major manufacturing industries reported *larger* profit ratios than the steel industry.

18. But the steel industry's investment in facilities is so large in relation to dollar sales compared to manufacturing industries generally that, in order to show a comparable return on its investment, the steel industry must realize a larger-than-average profit ratio on its sales dollar.

Steel Industry Profits Are Overstated Because Depreciation Is Understated

19. Profits in most industries have been exaggerated in years of inflation because of the accounting practice of valuing assets at historical rather than replacement costs. In more recent years, the differences between depreciation on original and replacement cost bases have tended to narrow but even in 1955 current cost depreciation was still running 36.7 per cent above the corresponding original cost depreciation. The understatement of depreciation in 1955 led to a significant *overstatement* of actual profits.

20. Costs of steel producing facilities have increased so rapidly in recent years—from 200 to 300 per cent since the nineteen thirties for major equipment items—that actual replacement costs have risen far above the historical values assigned on the steel industry's balance sheets. Therefore, the depreciation allowable under conventional accounting methods and chargeable to expenses in tax statements seriously understates the capital costs of producing steel.

21. It seems apparent that accelerated amortization has offset only part of the underdepreciation of assets. But even this partial relief will exact its price tomorrow. When this accelerated amortization is completed over the next few years, the result will be an increase in the magnitude of underdepreciation and a rise in the magnitude of phantom profits.

22. The dollar profits reported by the steel industry include phantom profits, which actually are a consumption of capital. These phantom profits are, however, subject to income taxes. From 1940 to 1956, the deficiency in depreciation charges has been $904.0 million for United States Steel alone. Since depreciation allowances are *understated*, the funds for facility replacement programs must be obtained in part from retained earnings.

23. While inadequate depreciation allowances are not exclusively a steel in-

95009 O—58—pt. 4——17

dustry problem, the large and expensive facilities which steel production requires and their durability accents the difficulty of financing replacement facilities out of depreciation charges.

Inflation Impairs Net Worth Comparisons

24. Purported high returns on net worth are completely misleading. They reflect an inevitable fiction which arises during a period of inflation. Profits are stated in current inflated dollars; net worth is stated in good part in old or "hard" dollars. In recent years, profits have been overstated for the steel industry because of the understatement of depreciation. Of equal significance, net worth is drastically *understated.* The return on net worth, therefore, gives no indication whatsoever of how much can be earned on dollars invested currently.

Steel Profits Must Be Related to Level of Business Activity

25. Steel profits have not been "exorbitant." They have been at record high levels because national economic activity and steel production also have been at record levels. In an industry like steel, which has experienced wide fluctuations in output over the years, it is dangerous to assume that the level of profits in a boom year like 1955 represents normal earning power. This was one of the best years ever experienced in the steel industry, as it was for virtually all industry. Merely because steel profits achieved these record levels does not prove that they are too high any more than record levels of hourly earnings of steelworkers provides evidence that they are too high. Even moderate declines in volume can mean sharp declines in profits as was evident in 1952 and 1954. Steel profit margins are widest at the peak of a boom and lowest or nonexistent in periods of recession or depression.

26. It is dangerous to hold that the 1955 experience represents a level of profits which could have been reduced safely. To reduce profit margins obtained at boomtime levels to some assumed average level would increase the steel industry's *vulnerability* to any future declines in volume. To repeat, the actual historic record of the past decade provides no basis for the conclusion that the steel industry's profits are not inseparably linked to changes in volume from the trough to the peak of the business cycle as well as from peak to trough.

Dividends to Steel Stockholders

27. There has been no marked upward trend in the share of the sales dollar paid as dividends during the 1939-56 period. Rather, the ratio has tended to move sidewise within a range of about 1.5 percentage points during the period. These data do not support the inference that dividend payments were unusually high when the volume of business is considered. The distribution of the sales dollar prevailing in 1955 reflected primarily the record volume of sales and

output in that year. The pattern did not differ significantly from that in other years of high volume.

Funds for Steel Expansion Are Obtained from Internal and External Sources

28. A survey of 16 steel companies reveals that, from 1946 to 1956, they sold approximately $1.5 billion in securities, one-third of which was convertible bonds and common and preferred stock; additional funds were borrowed from insurance companies and from customers. However, the bulk of the financing of new steel facilities for expansion and replacement of productive capacity has been from internal sources. As is true in other industries, steel companies have had to decide what proportions of new financing properly should be obtained by increasing debt and what share from the sale of stocks. Each company has made the decision in terms of its own special situation.

29. The reinvestment of corporate earnings and depreciation allowances—which the steel industry has utilized as a major source of funds—is a recognized method of financing. It has been so extensively used by American business that in the ten year period ending in 1956, about two thirds of all corporate funds for investment came from these sources. Internal sources, now as in the past, continue to provide the major funds for financing plant and equipment in manufacturing industries. The practice of the steel industry in this connection is fairly typical rather than unique.

30. Retained earnings which are reinvested in a business are *not* "riskless" or "costless" capital; they represent a risk and a cost to the stockholder. Retained earnings do *not* constitute a levy on a corporation's customers; they represent a use of sales receipts which could otherwise be paid out to the stockholder as dividends.

31. A steel company cannot set prices arbitrarily without any relationship to market forces. Prices set excessively high without regard to market conditions would result in a shift to substitute metals and to other materials and would be accompanied by a reduction in sales and in the volume of profits. Such a price would be self defeating and fail to achieve its objective. Paradoxically, the funds such higher prices were allegedly designed to obtain would not be forthcoming. Moreover, they would not be required because of the idle capacity which would develop in the industry. A steel company is as much concerned as unions should be that it does not price its products out of the market. The consumer makes his decision to buy or not to buy a product in terms of the price asked. He does not make his decision on the basis of what a company will do with the funds received.

Steel Prices, Profits, Productivity, and Wages

IN July 1956, the United Steelworkers of America published two documents which purported to show significant facts and trends for the steel industry and for the national economy. These documents were:

1. "Steel and the National Economy 1956"
2. "Facts On Steel: Profits, Productivity, Prices and Wages 1956"

These volumes were designed to show that steel prices have been increased unnecessarily and excessively and hence have contributed to inflation and that these increases have been due to the desire by the industry to earn exorbitant profits. The Union denied that past price increases have been the result of past increases in labor costs and in other costs. The Union also claimed that real wages, in terms of purchasing power, of steelworkers have risen less than steel productivity and hence higher wages have created no pressure for price increases.

To reach these conclusions, the Union relied upon data related to base periods which in many instances had little economic relevance. It also relied upon projections and exaggerations which find no support in the past experience of the industry. It relied upon meaningless comparisons with other industries. It had to ignore pertinent facts concerning the economic nature of the industry.

The present study is designed to "set the record straight." No effort will be made to correct every factual error in the Union Briefs. Rather, attention will be directed primarily to the key charges made by the Union concerning price increases and their effects on the economy, cost-price relationships, productivity changes, price policy and profit margins, the level of steel profits, and past methods of financing expansion.

I. SELECTION OF BASE PERIODS

THE selection of 1939 and 1947 as base periods, affects many of the Union's conclusions. It is important at the outset, therefore, to indicate when the use of these dates is improper.

The Use of 1939 as a Base Period

IN many of its comparisons, the Union document, "Facts On Steel," shows the changes since 1939. The use of 1939 is misleading in connection with financial comparisons. That was a year in which both the national economy and the steel industry were still depressed. For example, total unemployment was approximately 9.5 million. The operating rate in the steel industry was only 64.5 per cent of capacity as compared with 82.1 per cent in 1940, 97.3 per cent in 1941 and 93 per cent in 1955. Since profits are a residual item, they tend to contract very sharply during periods of recession. Accordingly, in 1939, steel profits were low, dividends were low, and the return on net worth was low. At page 15 of "Facts On Steel," it is pointed out that "the number of these [25] companies paying cash dividends to their stockholders has increased sharply since 1939. In that year, only 7 of these companies made a cash payment to their common stockhold-

ers." Clearly, a year in which fewer than one company out of three can pay dividends is not a very useful or significant one for purposes of financial comparison. Comparisons with such a year will tend to show exceptional percentage increases because of the relatively low base from which they are measured.

A low level of profits also affects the significance of comparisons of the distribution of the sales dollar over time. In a year of depression, wages and salaries tend to take a higher proportion of the fewer sales dollars because profits are much lower than in a period of prosperity. A few simple figures illustrate the point. Suppose that wages and salaries account for 45 cents out of each dollar of sales or a ratio of 45 per cent. Now assume that profits before taxes decline the equivalent of 10 cents of the sales dollar and employment costs remain the same. Then employment costs are 45 cents out of 90 cents, or 50 per cent of the sales dollar. The same tendency is true for other components of the company's costs.

Thus, it is not surprising to find that the share of the sales dollar accounted for by steel industry employment costs declined from 39 cents in 1939 to 33½ cents in 1955. The change in the level of operations and the impact on profits was a significant factor in this decline. It is interesting to note that in 1941, when the steel industry was operating at high level rates, employment costs were 34.1 per cent of the sales dollar or not too different from the ratio in 1955 when a relatively high proportion of capacity also was being used.

The selection of 1939 as a base date also affects the magnitude of increases in productivity and tends to exaggerate them. This is so because volume is an important element in short term changes in output per manhour. When volume declines, the most effective organization of resources and of manpower is more difficult to obtain and hence output per manhour is lower. On the other hand, when the economy moves up, as it has from depressed to boom levels, output usually rises more rapidly than does employment since workers are used more efficiently. As a result, output per manhour rises more than its long term rate of increase.

The effects of the volume factor were clearly reflected in the very sharp increase in productivity in 1955 from the 1954 level. The 11 per cent rise in productivity in that year occurred in large part because the rate of steel operations rose from 71.0 per cent to 93.0 per cent of capacity.

This fact also was recognized by the Steel Industry Fact Finding Board in its report on the 1949 wage dispute. That Board concluded "the companies were correct in contending that the union's emphasis on the change in manhour productivity from 1939 to 1948 and 1949 was misplaced. Because the rate of operation is such an important factor in productivity, valid comparisons can be made only for years of similar rates of operation, such as 1941 and 1948." [1]

For productivity and financial comparisons to be meaningful, they must relate to years when activity is at comparable levels. The comparisons have greatest value when they can be made between a number of years of comparable activity rather than between single years when such volume may have been attained.

While the year 1939 involves many distortions when used as a base period for financial and productivity comparisons, it does have validity for price and wage rate comparisons. In the immediate pre-World War II years, for example, hourly wages had shown little change after the 1937 increase and prices had recorded relative stability. Under

[1] *Report to the President of the United States on the Labor Dispute in the Basic Steel Industry by the Steel Industry Board appointed by the President,* July 15, 1949, p. 45.

these conditions, 1939 can be used to determine the magnitude of wartime and postwar inflation in wages and in prices without the problem of distortion that attends the use of that year as a base in connection with financial and productivity data.

The Use of 1947 as a Base Period

MOST of the Union's charts and tables as well as many of the long term comparisons use 1947 as a base date (see, for example, "Facts On Steel," page 8, 11, 14, 15, 17, 22, 23, 27, 30, 35, 36, 49, 50, and 51). The use of 1947 as a base period has the effect of ignoring the substantial pressures on steel costs which were not accompanied by a corresponding rise in steel prices in the preceding war and the early postwar years. The following tabulation shows the changes in the finished steel price index from 1939 to 1947 and the comparative changes in several selected price indexes:

Increases in Wholesale Price Index, Industrial Price Index, Selected Steel Costs, and Finished Steel Prices, 1939-1947

	1939	1947	% Increase
Finished steel prices (1947-49 = 100)	68.0	89.1	31.0
Wholesale price index (1947-49 = 100)	50.1	96.4	92.4
Nonfarm, nonfood index (industrial prices) (1947-49 = 100)	58.1	95.3	64.0
Steel Costs			
Steel scrap	$16.39	$36.36	121.8
Employment costs	$ 0.89	$ 1.49	67.4
Construction costs (ENR) (1947-49 = 100)	52.1	92.2	77.0

The rise in finished steel prices of 31 per cent between 1939 and 1947 was less than half as large as the rise in all industrial prices and only about one-third of the 92.4 per cent increase in the general wholesale price index. Similarly, important ingredients of steel costs had also increased substantially more than had finished steel prices. By 1947, steel scrap prices had more than doubled, construction costs had risen by 77 per cent, and employment costs per manhour by 67 per cent.

By emphasizing the changes which have taken place since 1947, the Union document ignores the fact that the changes since that date reflect in part a catching up of steel prices with the inflation which had developed on a significant scale in virtually all the rest of the economy during the World War II years and the first two postwar years. Moreover, in terms of any significant economic criteria, there are good reasons why the year 1947 should not be used as a base period. The postwar inflation was still in effect, the readjustments from the war economy were still taking place, there were the growing pressures of our early postwar aid programs to Europe, many goods were still in scarce supply, and the economy was still in its first postwar phase of expansion reflecting in part the deferred demand of World War II. This combination of factors as well as other pressures at work indicate that the year 1947 has many limitations or defects as a basis for determining the significance of subsequent price increases and their relationships.

II. FINISHED STEEL PRICES AND THE GENERAL PRICE LEVEL

CONSIDERABLE public attention has been devoted to the rise in the general price level. Some groups blamed this rise on the steel industry. Since mid-1955, finished steel prices have risen, as have many other prices. But is it true that changes in finished steel prices determine or play a primary role in the direction or magnitude of changes of the general price level? The validity of this thesis may be determined by comparing changes in finished steel prices and the indexes of wholesale prices and consumer prices since 1939.

Table 1 and Chart 1 show the changes in finished steel prices and the two comprehensive price indexes since 1939. The increase in finished steel prices lagged behind the rise in the index for all commodities throughout the war and postwar period. It wasn't until 1956 that the cumulative increase in finished steel prices exceeded that for all wholesale prices. The rise in finished steel prices was 138.4 per cent as compared with 128.1 per cent in the wholesale price index.

Consumer prices usually fluctuate much less than wholesale prices. Both the all commodity index and the finished steel price index rose more than the consumer price index. It is interesting to note that the lag in finished steel prices was so marked in the World War II and the early postwar period that it was not until 1953 that the over-all rise in finished steel prices from 1939 exceeded that in the consumer price index. This was a very unusual relationship.

TABLE 1

Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, 1939—December 1956 (1939 = 100)

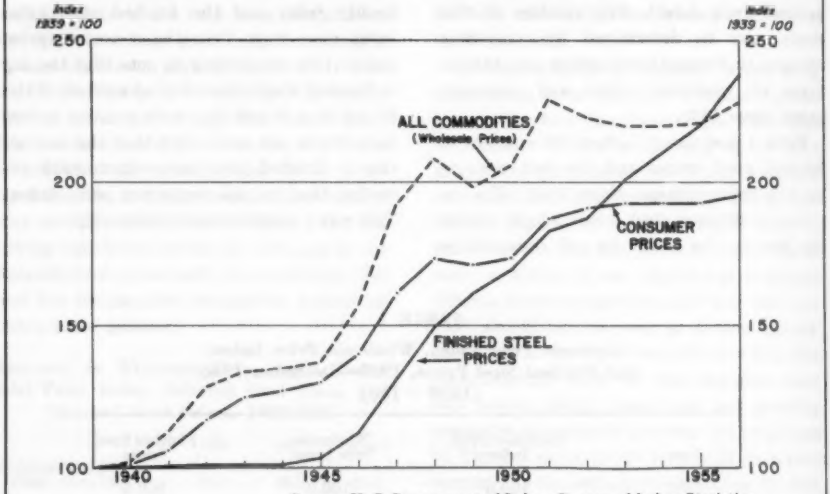
Year	Consumer Price Index	Wholesale Price Index	Finished Steel Prices
1939	100.0	100.0	100.0
1940	100.8	102.0	100.1
1941	105.9	113.4	100.6
1942	117.3	128.1	100.7
1943	124.6	133.7	100.9
1944	126.6	134.9	100.9
1945	129.5	137.3	103.2
1946	140.4	157.1	112.4
1947	160.8	192.4	131.0
1948	173.1	208.4	149.0
1949	171.4	198.0	161.3
1950	173.1	205.8	169.4
1951	186.9	229.1	183.1
1952	191.1	222.8	187.1
1953	192.6	219.8	201.3
1954	193.3	220.2	210.0
1955	192.8	221.0	219.9
1956	195.6	228.1	238.4
Dec. 1956	198.7	232.1	248.2

Source: U. S. Department of Labor, Bureau of Labor Statistics.

An examination of Chart 1 reveals little relationship between the changes in finished steel prices and in the general level of prices. This lack of relationship is more clearly emphasized when the changes are examined on a year to year basis, and for selected periods within the span of 17 years.

Chart No. 1

CONSUMER, WHOLESALE AND FINISHED STEEL PRICE INDEXES



Source: U. S. Department of Labor, Bureau of Labor Statistics.

Table 2 shows the year to year changes for each of these indexes. It will be noted that in the years 1940 to 1944, finished steel prices failed to increase by as much as 1 per cent in any year. During that period, the wholesale price index recorded annual increases ranging from less than 1 per cent to 13 per cent. The consumer price index showed changes which reached as much as 10.8 per cent in 1942.

In 1946, the first postwar year, finished steel prices rose 8.8 per cent or about the same as the rise for the consumer price index. However, this rise was less than the rise in the wholesale price index. In 1947, similar relationships prevailed with the rise in finished steel prices lagging significantly behind the increase in wholesale prices.

While all of the indexes rose in 1948, the steel price index rose by about 5 percentage points more than did the wholesale price index. In 1949, steel prices rose while the other price indexes declined.

In 1950, all of the indexes rose with the rise in steel prices somewhat greater than that in the more comprehensive indexes. In 1951, when all the indexes rose, finished steel prices lagged behind wholesale prices.

In 1952, the steel index rose by about 2

TABLE 2

Year to Year Per Cent Changes in Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, 1939—December 1956

Year	Consumer Price Index	Wholesale Price Index	Finished Steel Prices
1940	+ 0.8	+ 2.0	+ 0.1
1941	+ 5.0	+ 11.2	+ 0.4
1942	+ 10.8	+ 13.0	+ 0.1
1943	+ 6.2	+ 4.4	+ 0.1
1944	+ 1.6	+ 0.9	0
1945	+ 2.3	+ 1.8	+ 2.3
1946	+ 8.5	+ 14.4	+ 8.8
1947	+ 14.5	+ 22.5	+ 16.6
1948	+ 7.6	+ 8.3	+ 13.7
1949	− 1.0	− 5.0	+ 8.3
1950	+ 1.0	+ 3.9	+ 5.0
1951	+ 8.0	+ 11.3	+ 8.1
1952	+ 2.3	− 2.8	+ 2.2
1953	+ 0.8	− 1.3	+ 7.6
1954	+ 0.3	+ 0.2	+ 4.3
1955	− 0.3	+ 0.4	+ 4.7
1956	+ 1.5	+ 3.3	+ 8.4
Dec. 1956	+ 1.5	+ 1.7	+ 4.1

Source: U. S. Department of Labor, Bureau of Labor Statistics.

per cent while wholesale prices generally declined by about the same percentage. In 1953-1955, the annual increase in steel prices ranged between 4.3 per cent and 7.6 per cent while the consumer price index and the wholesale price index remained about unchanged. In the year 1956, all indexes rose with finished steel prices showing a larger increase than did the wholesale price index.

These comparisons show that since 1939 the change in finished steel prices has rarely been closely related to that in the general wholesale price index or to changes in the consumer price index. Of the 18 comparisons shown, the percentage change in finished steel prices was within one percentage point of the change in the wholesale price index in only two years (1944 and 1945); it was that close to the consumer price index in five years (1940, 1945, 1946, 1951, and 1952).

It may be thought that the reason for the absence of any close relationship was because it took more than a year for the pressure of steel prices to work its way through the economy. Accordingly, it is helpful to examine the changes in these general price indexes and in finished steel prices for longer periods of time. The data are shown in Table 3 and Chart 2.

The first period, 1939 to August 1945, covers the World War II years. During that period, the wholesale price index rose 37.1 per cent and the consumer price index by 30.5 per cent despite the rise of only 3.8 per cent in finished steel prices. The fact that steel prices were held down more effectively by wartime price controls did not prevent the substantial rise in the general price indexes during that period.

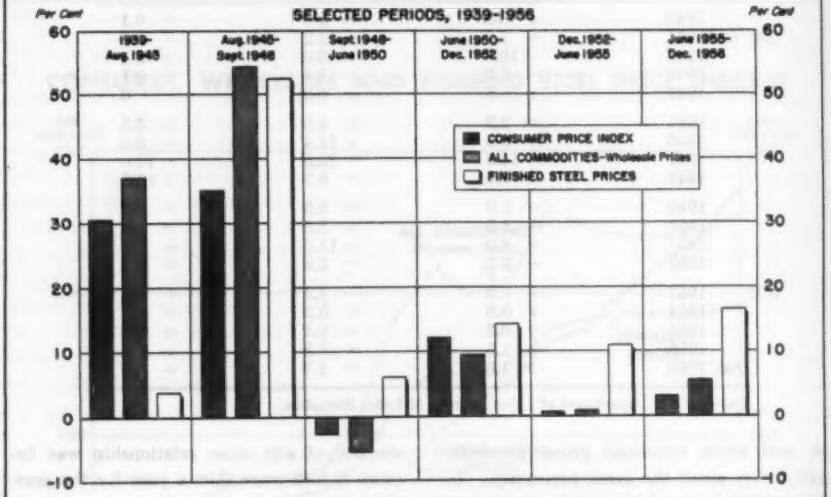
The period from August 1945 to September 1948 covers the deferred price inflation which culminated when the comprehensive indexes reached their peak in September

Chart No. 2

CONSUMER, WHOLESALE AND FINISHED STEEL PRICES

PER CENT CHANGE

SELECTED PERIODS, 1939–1956



Source: U. S. Department of Labor, Bureau of Labor Statistics.

1948. During this period, the rise of 52.5 per cent in finished steel prices was slightly smaller than the rise for the wholesale price index. It compared with a rise of 35.2 per cent in the consumer price index.

The period September 1948 to June 1950 covers the 1948-49 recession and the recovery which had taken place prior to the Korean War. During this period, despite a rise of 6.1 per cent in finished steel prices, the other comprehensive indexes declined 2.9 per cent and 5.6 per cent. The rise in finished steel prices did not cause a rise in the general price level during this period.

The period June 1950 to December 1952 covers the Korean War. While it is true that the Korean War was terminated formally several months later, the price indexes, which had experienced a sharp rise and then a decline during the Korean War had reached a level in December 1952 about which they were to fluctuate for the following 2½ years. During the Korean War period, finished steel prices rose 14.3 per cent or slightly more than the increases of 9.4 per cent and 12.1 per cent shown for the two comprehensive indexes.

The period from December 1952 to June 1955 was characterized by relatively stable prices in the economy. During this period, the wholesale commodity price index and the consumer price index recorded only nominal changes. This relative stability in wholesale and retail prices took place de-

TABLE 3

Changes in Consumer Price Index, Wholesale Price Index, and Finished Steel Prices, Selected Dates, 1939-1956 (1947-49 = 100)

Year	Consumer Price Index	Wholesale Price Index	Finished Steel Prices
1939	59.4	50.1	68.0
Aug. 1945	77.5	68.7	70.6
% Change	+ 30.5	+ 37.1	+ 3.8
Aug. 1945	77.5	68.7	70.6
Sept. 1948	104.8	106.1	107.7
% Change	+ 35.2	+ 54.4	+ 52.5
Sept. 1948	104.8	106.1	107.7
June 1950	101.8	100.2	114.3
% Change	− 2.9	− 5.6	+ 6.1
June 1950	101.8	100.2	114.3
Dec. 1952	114.1	109.6	130.6
% Change	+ 12.1	+ 9.4	+ 14.3
Dec. 1952	114.1	109.6	130.6
June 1955	114.4	110.3	144.8
% Change	+ 0.3	+ 0.6	+ 10.9
June 1955	114.4	110.3	144.8
Dec. 1956	118.0	116.3	168.8
% Change	+ 3.1	+ 5.4	+ 16.6

Source: U. S. Department of Labor, Bureau of Labor Statistics.

spite the rise of 10.9 per cent in finished steel prices which were still catching up on the lag in prior years.

The final period shown is from June 1955 to December 1956, the period during which general price indexes rose and new fears developed concerning the inflation spiral. Although finished steel prices rose 16.6 per cent during this period, the rise in the consumer price index was only about 3 per cent and that for wholesale commodities was 5.4 per cent. Much of the rise in living costs was in the service sector rather than in the prices of manufactured goods. In fact, the prices of some electrical appliances are the same or lower than they were a year and a half ago.

Whether the comparisons are made on a year to year basis or for significant periods within the past 17 years, it is clear that there has been no consistent relationship between the changes in finished steel prices and those recorded either for consumer prices or for wholesale prices. However, there has been a general inflation in prices during this period. In one period, World War II, a substantial rise in the general level of prices occurred despite the relative stability in finished steel prices. The situation was just the reverse in the period of price decline from September 1948 to June 1950 and in the period of general price stability from December 1952 to June 1955. In both these latter periods, despite rises in steel prices, the comprehensive price indexes either declined or showed only nominal changes. In the period of postwar inflation from August 1945 to September 1948, and

from June 1950 to December 1952 the rise in finished steel prices did parallel closely the rise in other wholesale prices. **Changes in steel prices undoubtedly affect very significant areas of the economy but they do not determine changes in the general level of wholesale prices or in the cost of living.**

Relative Importance of Steel in The National Economy

THERE is good reason for the fact that steel prices do not determine the general level of prices. Although the steel industry is a giant industry, it accounts for only a small proportion of the national economy. Total sales for the leading steel companies aggregated $14,049.3 million in 1955. Included in this total is a substantial amount of nonsteel activity including shipbuilding, cement, coal mining and other activities. Nevertheless, if we use this figure as the total sales of steel, the following percentages can be derived as measures of the relative impact of steel price changes on the entire economy.

> Total corporate sales in 1955 were $568.9 billion—steel sales were only 2.5 per cent of this total.
>
> Total gross national product in 1955 was $390.9 billion—steel sales were equal to 3.6 per cent of this total.
>
> Total gross national product less services bought by consumers aggregated $298.8 billion in 1955—of this total steel sales accounted for 4.7 per cent.

According to the United States Bureau of Labor Statistics, the iron and steel component of the wholesale price index is given a weight of 5.8 per cent. Of this total, 3.8 per cent is represented by finished steel products and .9 per cent by foundry and forge shop products. If the latter are excluded, the iron and steel weight in the wholesale price index becomes 4.9 per cent.

It is because steel accounts for a relatively small part of the final product prices for many important products that changes in steel prices can have only a minor effect upon the general price level. The steel industry is a giant industry. But it is only one of many giant industries in a giant economy. The use of absolute dollar totals running into billions of dollars naturally creates an illusion of impact which far exceeds the actuality. It is only when the $14 billion steel industry is measured against the $400 billion economy that a proper picture is obtained of its relative significance.

III. COST-PRICE RELATIONSHIPS

THE Union insists that finished steel prices have risen much more than steel costs. To prove its point, the Union compares changes in finished steel prices with changes in selected raw material costs since 1947. It then compares separately the estimated revenue yield from finished steel price increases with the cost of wage increases and concludes that the average increase in finished steel prices yielded more than three times as much as the cost of the wage increase.

A significantly different picture emerges when changes in finished steel prices are compared with *all* increases in steel costs and when the comparisons are made for the entire World War II and postwar period. As the following analysis shows, the increases in the costs of goods and services bought by the steel industry have been somewhat *greater* than the rise in finished steel prices since 1939. Similarly, it is shown that steel labor costs have risen far more than the gains in steel productivity and hence, have created considerable pressure for steel price increases.

Finally, the Union theory that price increases should be confined at most to the cost of wage increases is checked against the level of steel profits and it is shown that any such policy would have resulted in considerable losses to the steel industry despite the tremendous increase in volume and in its contribution to the economy in recent years.

In the following sections, there is considered first, the relationship between changes in steel material costs and finished steel prices, then the changes in steel productivity, wages and prices, and finally, the alleged gains from price increases as compared with wage increases.

Steel Materials Costs Have Risen More Than Finished Steel Prices

THE Union brief presents selected data to prove that the costs of steel materials have risen significantly less than finished steel prices.

> "The cost of the materials purchased by the steel industry has risen *somewhat* in the postwar period. But this rise has been moderate in relation to the rise in the price of steel products sold by the industry . . . The rise in steel prices since 1947 has dwarfed the rise in the 2 major steel cost items—materials and labor—by almost 3 to 1." ("Facts On Steel," pp. 35, 36.) (*Italics* added.)

To reach this conclusion, the Union had to confine its comparisons to price changes for *selected* materials during the period since 1947.

A significantly different conclusion is reached if the comparisons cover the entire war and postwar period and include *all* the items which are important ingredients of steel material costs.

The raw material price data presented in the Union brief are incomplete and, in some instances, inaccurate. Thus, for example, the Union failed to include price changes for iron ore, coke, manganese ore, and many other raw materials—some of which had considerably larger price rises than the items it listed. On the basis of United States Steel's price experience, from the Union's base period, 1947-49 to March 1956, iron ore prices had risen 130.2 per cent, coke by 18.3 per cent, and manganese ore by 133.2 per cent. The Bureau of Labor Statistics price indexes of the three important raw materials selected by the Union had increased as follows: steel scrap, 22.3 per cent, tin, 10.4 per cent, and coal, 7.0 per cent. United States Steel's experience showed increases of 35.9 per cent, 10.8 per cent, and 0.3 per cent, re-

spectively for these raw materials. The difference in rate of increase is due to the fact that the combination of actual grades used by United States Steel differed from the weightings used by the Bureau of Labor Statistics.

The composition of raw materials acquired by steel companies varies depending upon the items they produce and the degree of integration of operations. The significance of the Union's data may be checked by using the experience of United States Steel Corporation. On the basis of that experience, the items *excluded* from the Union's tabulation increased an average of 48.3 per cent between the 1947-49 base period and March 1956. In contrast, the items cited by the Union showed a rise of only 22.2 per cent. To determine the average rise, the individual commodities have been weighted by their relative importance in United States Steel's purchasing in 1955. Data are not available to make similar estimates on the basis of industry-wide purchases.

By presenting an incomplete list of the raw materials used in steel making, the Union has attempted to create the impression that in the postwar period, raw material costs have increased only "somewhat," while prices of finished steel have increased substantially. It is true that finished steel prices have risen more than raw material costs since the 1947-49 period. But here again, we have an illustration of the results of careful selection of base periods. By starting the comparison with 1947-49, the Union blots out the significant distortion which had developed in the years prior to those dates. Thus, for example, in the 1947-49 period, United States Steel paid an average of 106.7 per cent more for raw materials than it did in 1939. If petroleum, oxygen, gas, and electricity are included in the total, then the total rise in raw material and fuel costs was 85.4 per cent between 1939 and 1947-49. During the same period, the Bureau of Labor Statistics index of finished steel prices rose only 47.1 per cent. (See Chart 3.)

A rough check on the relationship between the prices paid for materials and the selling price for finished steel is provided by the share of the sales dollar used to pay for materials. Because of changes in technology this relationship is not a perfect test. Nevertheless, it is useful to note that in 1939, products and services bought accounted for 34.7 per cent of the United States Steel sales dollar while in 1947-49, the proportion had risen to 39.6 per cent. This change reflected the lag in the rise of finished steel prices behind the wartime and early postwar rise in raw material costs. For the entire basic steel industry, the costs of materials, supplies, freight, and other services increased from 44.3 per cent of the sales dollar in 1939 to 47.8 per cent in 1947-49.

A significantly different picture from that portrayed by the Union emerges if the comparisons are made for the entire 1939-1956 period. Table 4 presents the changes prior to 1947-49, since 1947-49, and for the entire period combined. From 1939 to March 1956, the prices of raw materials used by United States Steel Corporation rose 179.8 per cent, the prices of fuels rose 59.5 per cent and the combined total rose 144.8 per cent. This was a moderately greater rise than that of 131.0 per cent recorded for finished steel prices. If the comparison is moved forward to the end of 1956, the rise in raw material costs and fuels is 169.1 per cent as compared with a rise of 148.2 per cent in finished steel prices.

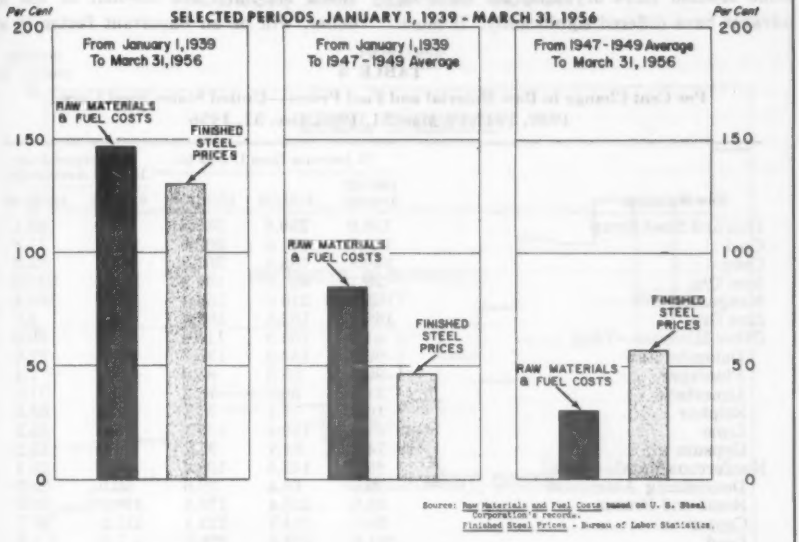
Again, the changes in the share of the sales dollar spent for raw materials confirms these trends. For United States Steel, the proportion was 34.7 per cent in 1939 and 35.2 per cent in 1956; for the steel industry the ratio was 44.3 per cent in 1939 and 45.8 per cent in 1956 (43.6 per cent in 1955). It will be noted that the Union has emphasized

Steel Prices, Profits, Productivity, and Wages

Chart No. 3

PERCENT INCREASE IN RAW MATERIALS AND FUEL COSTS AND FINISHED STEEL PRICES

SELECTED PERIODS, JANUARY 1, 1939 - MARCH 31, 1956



Source: Raw Materials and Fuel Costs based on U. S. Steel Corporation's records.
Finished Steel Prices - Bureau of Labor Statistics.

the decline in the proportion of the sales dollar spent for materials since 1947 ("Facts On Steel," p. 35) as evidence that material costs have risen less than finished steel prices. But it ignores the increase in the proportion of the sales dollar for material costs which would prove the opposite relationship prevailed between 1939 and 1947. When the comparison is made for the entire period 1939 to 1956, the distorted relationships created during World War II and the early postwar years are eliminated and a more realistic and more significant comparison emerges.

Clearly, there has been a major rise in the costs of materials bought by the steel industry. This rise in material costs has contributed to the pressure for higher prices for finished steel during the war and postwar years. To a large extent this rise in raw material prices has reflected the rise in labor costs. This is particularly evident in connection with such key products as coal and iron ore which are produced to a large extent by many steel companies.

The Union claims that "Steel prices have exceeded [material] cost increases by a ratio of nearly 3 to 1." ("Facts On Steel," p. 35.) The data cited above indicate that this is a fantastic distortion of what has been happening to raw material cost—finished price relationships. Since 1939, the rise in steel

prices and raw material costs has been in a ratio of about one for one rather than three to one as alleged by the Union. The relative changes have been of similar magnitude for the entire period. However, for some selected pairs of dates, the rates of advance have differed significantly. It must be added that there is no reason why in any designated short term period, steel prices should move exactly parallel to raw material costs. However, over longer periods of time, raw material costs, which account for between one-third and one-half of the sales dollar, will be an important factor in steel

TABLE 4

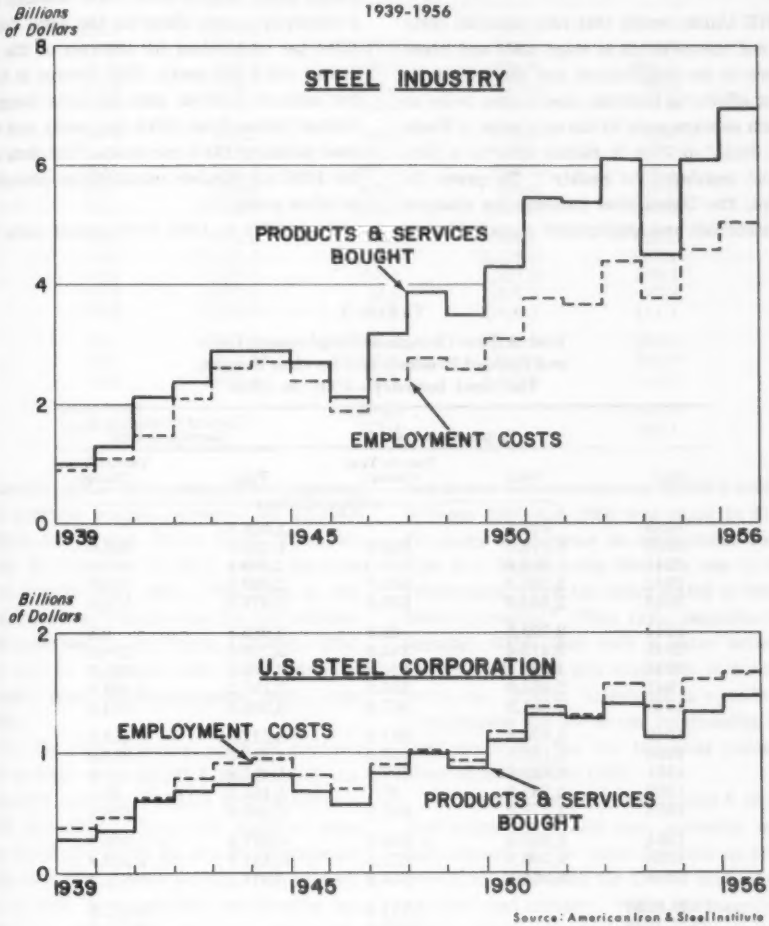
Per Cent Change in Raw Material and Fuel Prices—United States Steel Corp. 1939, 1947-49, Mar. 31, 1956, Dec. 31, 1956

Raw Materials	% Increase from 1/1/39 to:			% Increase from 1947-49 Average to:	
	1947-49 Average	3/31/56	12/31/56	3/31/56	12/31/56
Iron and Steel Scrap	158.0	250.6	333.8	35.9	68.1
Coal	170.7	171.6	202.6	0.3	11.8
Coke	140.9	185.1	201.8	18.3	25.3
Iron Ore	22.1	181.1	194.1	130.2	140.9
Manganese Ore	35.4	215.8	259.4	133.2	165.4
Zinc Ore	169.6	182.8	182.8	4.9	4.9
Other Minerals—Total	61.0	103.9	110.8	26.6	30.9
Dolomite Raw	92.3	134.3	135.7	21.8	22.6
Fluorspar	99.8	85.0	85.0	− 7.4	− 7.4
Limestone	31.4	68.7	73.2	28.4	31.8
Sulphur	10.4	75.1	75.1	58.6	58.6
Lime	61.9	119.4	135.1	35.5	45.2
Gypsum	74.2	94.7	97.2	11.8	13.2
Nonferrous Metals—Total	85.9	142.5	129.4	30.4	23.4
Deoxidizing Aluminum	10.9	66.4	39.6	50.0	25.9
Brass and Bronze	63.0	226.4	178.3	100.2	70.7
Copper	92.7	314.7	223.1	115.2	67.7
Lead	231.5	228.3	228.3	− 1.0	− 1.0
Nickel	22.5	113.7	114.4	74.4	75.0
Terne	157.9	199.4	156.2	16.1	− 0.7
Tin	98.1	119.5	119.4	10.8	10.8
Zinc	151.1	170.0	170.4	7.5	7.7
Zinc Dross & Ashes	188.7	212.2	277.0	8.1	30.6
Nickel Base Alloys	− 1.2	400.0	455.6	406.1	462.3
Zinc Base Alloys	141.0	170.0	170.4	12.0	12.2
Ferroalloys—Total	49.9	109.8	124.5	40.0	49.8
Ferrochrome	38.6	84.2	99.1	32.9	43.7
Ferromanganese	95.2	155.1	175.7	30.7	41.2
Ferromolybdenum	3.1	63.8	73.8	58.9	68.6
Ferrosilicon	57.2	116.9	129.7	38.0	46.1
Silicomanganese	68.8	154.7	179.1	50.9	65.3
All other Ferroalloys	28.3	126.3	131.8	76.4	80.7
Total Raw Materials	106.7	179.8	211.3	35.4	50.6
Fuels					
Petroleum and Products	114.8	150.9	173.9	16.8	27.5
Oxygen	− 23.3	− 29.0	− 28.3	− 7.4	− 6.5
Gas	16.9	51.4	52.9	29.5	30.8
Electricity	5.2	31.5	31.8	25.0	25.3
Total Fuels	33.5	59.5	66.3	19.5	24.6
Combined Raw Materials and Fuels	85.4	144.8	169.1	30.8	43.0
FINISHED STEEL PRICES (BLS)	47.1	131.0	148.2	57.1	68.8

Chart No. 4

TOTAL EMPLOYMENT COSTS AND PRODUCTS AND SERVICES BOUGHT

1939-1956



Source: American Iron & Steel Institute

price determination. This is particularly true when the other important element of steel costs, namely labor, also records sharp changes.

Raw Material Cost Increases Parallel Those in Employment Costs

THE Union insists that raw material costs do not rise as much as wage costs and hence there is no justification for the industry's past efforts to increase steel prices twice as much as wage costs at the minimum. ("Facts On Steel," p. 37.) It claims this "is a 'formula' unrelated to reality." To prove its point, the Union cites comparative changes in materials and employment costs in United States Steel Corporation between 1940 and 1952.

It is instructive to examine the year to year changes in these two major items of costs for United States Steel and for the entire steel industry. The changes are shown in Tables 5 and 6 and Chart 4. For United States Steel, employment costs account for a relatively larger share of the sales dollar (39.4 per cent) than for the rest of the industry (33.5 per cent). The reverse is true for cost of services and products bought: United States Steel (33.1 per cent) and the steel industry (43.6 per cent). The data are for 1955 but similar relationships prevailed in other years.

From 1939 to 1956, employment costs in-

TABLE 5

Year to Year Changes in Employment Costs and Costs of Products and Services Bought, The Steel Industry—1939 to 1956

Year	Employment Costs		Costs of Products and Services Bought	
	Total	Year to Year Change	Total	Year to Year Change
	millions of dollars			
1939	913.1		1,036.0	
1940	1,116.0	202.9	1,331.0	295.0
1941	1,595.0	479.0	2,098.4	767.4
1942	2,127.0	532.0	2,399.2	300.8
1943	2,666.8	539.8	2,976.0	576.8
1944	2,729.2	62.4	2,985.8	9.8
1945	2,413.4	− 315.8	2,755.6	− 230.2
1946	1,983.1	− 430.3	2,173.8	− 581.8
1947	2,464.0	480.9	3,197.2	1,023.4
1948	2,831.8	367.8	3,931.5	734.3
1949	2,600.8	− 231.0	3,517.0	− 414.5
1950	3,150.8	550.0	4,356.0	839.0
1951	3,828.6	677.8	5,487.8	1,131.8
1952	3,788.9	− 39.7	5,401.2	− 86.6
1953	4,476.6	687.7	6,087.6	686.4
1954	3,888.0	− 588.6	4,577.9	− 1,509.7
1955	4,709.5	821.5	6,131.7	1,553.8
1956	5,064.4	354.9	6,977.1	845.4
1939-1956		4,151.3		5,941.1
1947-1956		2,600.4		3,779.9

Source: American Iron & Steel Institute.

TABLE 6

Year to Year Changes in Employment Costs and Costs of Products and Services Bought, United States Steel Corp.—1939 to 1956

Year	Employment Costs		Costs of Products and Services Bought	
	Total	Year to Year Change	Total	Year to Year Change
	millions of dollars			
1939	386.5		293.5	
1940	464.3	77.8	358.3	64.8
1941	628.3	164.0	604.6	246.3
1942	782.7	154.4	673.4	68.8
1943	912.9	130.2	730.6	57.2
1944	957.2	44.3	814.4	83.8
1945	825.5	− 131.7	670.1	− 144.3
1946	704.5	− 121.0	560.4	− 109.7
1947	903.6	199.1	839.4	279.0
1948	1,035.7	132.1	1,008.9	169.5
1949	945.9	− 89.8	885.7	− 123.2
1950	1,179.4	233.5	1,118.8	233.1
1951	1,374.5	195.1	1,327.9	209.1
1952	1,322.1	− 52.4	1,307.6	− 20.3
1953	1,569.2	247.1	1,418.7	111.1
1954	1,387.0	− 182.2	1,134.3	− 284.4
1955	1,614.9	227.9	1,355.2	220.9
1956	1,681.0	66.1	1,487.5	132.3
1939-1956		1,294.5		1,194.0
1947-1956		777.4		648.1

creased $1,294.5 million and costs of products and services bought increased by $1,194.0 million for United States Steel. Thus, for every $1 increase in labor costs, material costs rose by 92.2 cents. This ratio is only somewhat less than the one for one relationship criticized by the Union. (Up until 1953, the rise in material costs was somewhat greater than for employment costs from 1939.)

For the steel industry, costs of products and services rose $5,941.1 million and employment costs by $4,151.3 million between 1939 and 1956. Thus, raw material costs rose $1.43 for every $1 rise in employment costs over the 17 year period. It is interesting to note that a similar relationship has prevailed since 1947, the year which the Union used for many of its comparisons. The rise in raw material costs of $3,779.9 million between 1947 and 1956 was equal to $1.45 for every $1 increase in employment costs. This is a higher ratio than the one to one relationship which the union stated is "unrelated to reality." This ratio supports the industry claim that such a ratio between employment costs and materials is a *minimum one*. If it is "unrelated to a reality," it is because the one to one relationship has been much too low for the steel industry since either 1939 or 1947.

An examination of Tables 5 and 6 shows that employment and raw materials costs have moved in the same direction in *every year* since 1939 both for United States Steel and the steel industry. While the magnitude of the changes for both types of costs have not been precisely the same in each year, they

have been of similar magnitude in many years and have tended to have closer relationships over a two or three year period. Thus, out of 17 comparisons, employment costs increased more or fell less than raw material costs in 7 years for the entire steel industry. For United States Steel Corporation, the rise in employment costs was greater or the decline was less than for raw materials in 9 out of 17 years.

It is evident that over the years, the steel industry has had good reason to anticipate that an increase of $1 in employment costs would soon be accompanied by at least a similar rise in the costs of products and services bought. This relationship is not a casual or random one. When steel wages rise, wage patterns are established which spread promptly to iron ore, coal, coke, and other important raw materials. Since the steel companies produce many of these materials, they incur these higher costs rather promptly. Similarly, railroad wages and in turn railroad rates move upward. The net effect is a rise in both steel wages and other costs in amounts which in the past have tended to be similar.

The Union's efforts to prove that prices of finished steel have risen much more than prices of raw materials and that rises in raw materials costs have been much less than those in employment costs are not supported by the available data. Use of incomplete data for carefully selected periods is no substitute for all the facts. Certainly, the steel companies cannot use such partial data in compiling their financial results. On the basis of all the facts, it is clear that the Union's claims concerning raw material costs and their relationship to prices of finished steel are completely without substance.

IV. STEEL PRODUCTIVITY AND WAGES

THE Union brief asserts that increases in wages have not led to higher steel prices because "the increases received—and more—could have been met from the gains in productivity." ("Facts On Steel," p. 29.) Moreover, it is stated that the rise in productivity "has had the result of lowering sharply the unit labor costs of the [steel] industry." *(Idem.,* p. 26.) It is also claimed that "The industry has taken as its share [of productivity] in profits far too much of what should have gone to the workers in the mills and to the public." *(Idem.,* p. 28.) (See also "Steel and the National Economy," p. 12.) Finally, it is stated that "productivity is growing at an accelerating rate." *(Idem.,* p. 29.)

These assertions are intended to cut the tie between tremendous increases in labor costs and higher steel prices. They are disproven by the material contained in the Brief itself. Let us examine the facts. Throughout this discussion productivity refers to output per manhour rather than the productivity of all the factors of production including capital equipment.

Could the increases in labor costs in recent years have been absorbed out of increases in productivity? To answer this question, it is necessary to compare the percentage changes in productivity with the changes in total labor costs in the steel industry. When both increase at the same rate, unit labor costs remain unchanged. When labor costs outrun productivity, unit labor costs rise. The Union brief recognizes this relationship when it notes that "if the cost of each hour of labor is increased by wage rate increases proportionate to rising productivity, these increases can be *absorbed* out of the gains in productivity." ("Facts On Steel," p. 29.)

This proposition may be illustrated in simple terms as follows. Assume a worker produces 100 units an hour and that this involves total labor costs of $2 an hour. The unit labor cost is then 2 cents. If productivity increases so that 102 units are produced in an hour and labor costs increase to $2.04 an hour, the unit labor cost remains unchanged at 2 cents. Productivity and wages each have risen by two per cent. But if total labor costs rise more than 4 cents an hour or 2 per cent, then unit labor costs will rise. Thus, if the 2 per cent rise in productivity (to 102 units) is accompanied by a 10 per cent rise in labor costs (to $2.20 an hour), the unit labor cost will increase from 2 cents to 2.16 cents. Under these conditions, the rise in labor costs is greater than the rise in productivity and hence can not be met solely out of the rise in productivity. The result is increased pressure for price rises, reduction in profits, or some combination of both.

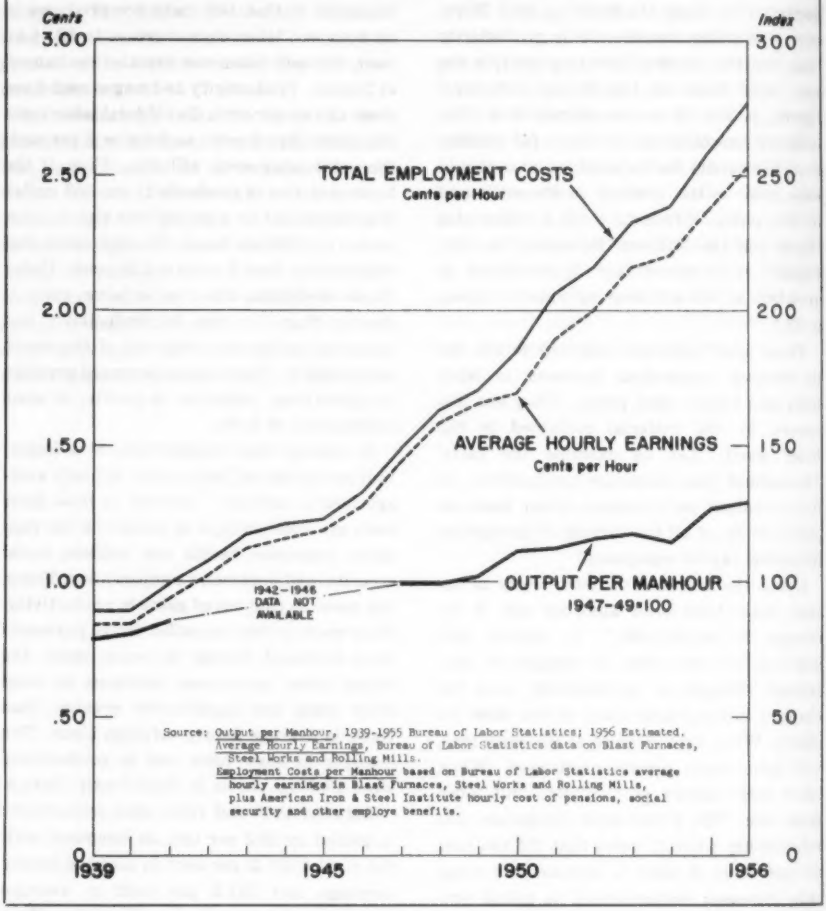
In making these comparisons, it is important to consider all labor costs, not only average hourly earnings. Included in total labor costs are such outlays as payments for pensions, insurance, health and welfare, social security, and workmen's compensation. These, too, must be paid out of gains in productivity. Since most of these so-called fringe payments have increased sharply in recent years, the longer term percentage increases in total labor costs are significantly greater than those in average hourly earnings alone. The changes in labor costs and in productivity since 1939 are shown in Table 7 and Chart 5.

Between 1940 and 1956, steel productivity increased by 56.3 per cent as compared with the rise of 201.2 per cent in average hourly earnings and 211.2 per cent in average hourly earnings plus pensions and welfare fund costs.

Between 1947 and 1956, steel productivity increased by 28.2 per cent as compared with

Chart No. 5

OUTPUT PER MANHOUR, HOURLY EARNINGS AND EMPLOYMENT COSTS PER MANHOUR



the rise of 75.7 per cent in average hourly earnings and 85.9 per cent in total employment costs. (See Chart 6.)

A similar picture of steel labor costs rising far more than steel productivity is shown when 1956 is compared with other years since

1940. (See Table 8.) Regardless of which year is used as the base, the rise in steel wages has far outstripped the rise in steel productivity.

The result has been a sharp rise in unit labor costs during the war and postwar years with the consequent pressure for higher prices. Table 9 shows the changes in unit labor costs since 1939. From 1940 to 1956, unit labor costs rose by 99.0 per cent. The data are shown graphically in Chart 7.

Despite its statements that higher wage costs could have been met out of increasing productivity, the Union brief shows a rising index of steel unit labor costs for the years 1947 to 1956. ("Facts On Steel," p. 51.) The Union's 1956 figure for unit labor costs is understated because it projected productivity on the basis of the Union's first quarter estimate of a gain of 4.7 per cent (in contrast to actual rise of only 0.2 per cent in 1956) and because it could not allow for the rise in wages which occurred after the table was prepared. Nevertheless, the Union's table does show a rise of 28.0 per cent in unit labor costs between 1947 and the first quarter of 1956. (The actual rise between 1947 and 1956 was 45.1 per cent. See Table 9.)

The Union brief attempts to explain away wage increases in excess of productivity gains by saying that:

> "In the past, the Union has often been forced to demand wage increases which in dollars and cents amount have ex-

TABLE 7

Output Per Manhour, Average Hourly Earnings, and Total Employment Costs, Basic Steel Industry, by Years, 1939-1956

Year	Output Per Manhour	Average Hourly Earnings	Total Employment Costs*
	(1947-49 = 100)		
1939	78.6	$ .84	$ .89
1940	81.4	.84	.89
1941	86.3	.94	.99
1942	n.a.	1.02	1.07
1943	n.a.	1.12	1.17
1944	n.a.	1.16	1.21
1945	n.a.	1.18	1.23
1946	n.a.	1.28	1.33
1947	99.2	1.44	1.49
1948	99.4	1.58	1.63
1949	101.6	1.65	1.70
1950	110.8	1.69	1.85
1951	111.5	1.89	2.06
1952	116.0	1.99	2.16
1953	117.0	2.16	2.33
1954	114.0	2.20	2.38
1955	127.0	2.37	2.58
1956	127.2 (p)	2.53	2.77

* Based on Bureau of Labor Statistics avarage hourly earnings in blast furnaces, steelworks, and rolling mills plus American Iron & Steel Institute hourly cost of pensions, social security, and other employe benefits.

n.a. Not available.

(p) Preliminary.

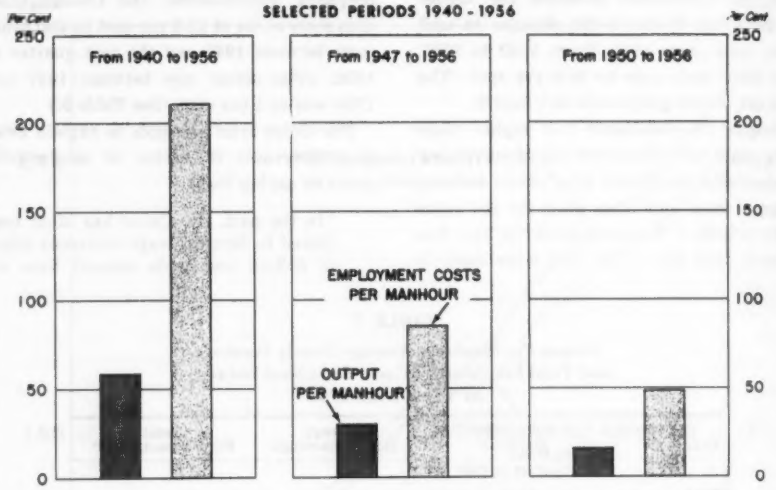
Sources: U. S. Department of Labor, Bureau of Labor Statistics; American Iron & Steel Institute.

Chart No. 6

PER CENT INCREASE IN STEEL INDUSTRY

Output Per Manhour and Employment Costs Per Manhour

SELECTED PERIODS 1940 - 1956



Source: Output per Manhour, 1939-1955 Bureau of Labor Statistics; 1956 Estimated. Employment Costs per Manhour based on Bureau of Labor Statistics average hourly earnings in Blast Furnaces, Steel Works and Rolling Mills, plus American Iron & Steel Institute hourly cost of pensions, social security and other employe benefits.

ceeded the percentage increase in productivity. This has been forced on the Union because of the Industry's Price Policy which has caused inflation in steel and has contributed greatly to it in the economy and has, thereby, robbed the workers of the wages they were already receiving. They and their Union have been forced to pursue these rising prices —the cost of living—just to *maintain* their 'real' wage position, i.e., their existing standard of living. This purely defensive role of a significant portion of many of the Union's wage proposals in recent years is generally unknown or overlooked." ("Facts On Steel," p. 29.)

Two observations may be made in connection with the foregoing explanation.

1. The Union admits that wages have risen more than productivity and thus negates its charge that steel "wage increases negotiated up to now have been less than warranted by productivity growth."

2. The Union never defines what it means by "recent years." However, in the period 1952 to 1955, the consumer price index showed only minor changes:

	1947-49=100
1952	113.5
1953	114.4
1954	114.8
1955	114.5

TABLE 8

Per Cent Increase to 1956 from Preceding Years for Output Per Manhour, Average Hourly Earnings, and Total Employment Costs, Basic Steel Industry

To 1956	Output Per Manhour	Average Hourly Earnings	Total Employment Costs
From:			
1939	61.8	201.2	211.2
1940	56.3	201.2	211.2
1941	47.4	169.1	179.8
1942	n.a.	148.0	158.9
1943	n.a.	125.9	136.8
1944	n.a.	118.1	128.9
1945	n.a.	114.4	125.2
1946	n.a.	97.7	108.3
1947	28.2	75.7	85.9
1948	28.0	60.1	69.9
1949	25.2	53.3	62.9
1950	14.8	49.7	49.7
1951	14.1	33.9	34.5
1952	9.7	27.1	28.2
1953	8.7	17.1	18.9
1954	11.6	15.0	16.4
1955	0.2	6.8	7.4

n.a. Not available.

Sources: Derived from data in Table 7.

TABLE 9

Changes in Unit Labor Costs, Basic Steel Industry, by Years, 1939-1956

(1947-49=100)

Year	Output Per Production Worker Manhour	Average Hourly Earnings	Total Employment Costs	Unit Labor Costs as Related to: Average Hourly Earnings	Unit Labor Costs as Related to: Total Employment Costs
1939	78.6	54.0	55.4	68.7	70.5
1940	81.4	54.0	55.4	66.3	68.1
1941	86.3	60.4	61.6	70.0	71.4
1942	n.a.	65.5	66.6	n.a.	n.a.
1943	n.a.	71.9	72.8	n.a.	n.a.
1944	n.a.	74.5	75.3	n.a.	n.a.
1945	n.a.	75.8	76.5	n.a.	n.a.
1946	n.a.	82.2	82.7	n.a.	n.a.
1947	99.2	92.5	92.7	93.2	93.4
1948	99.4	101.5	101.4	102.1	102.0
1949	101.6	106.0	105.7	104.3	104.0
1950	110.8	108.5	115.1	97.9	103.9
1951	111.5	121.4	128.1	108.9	114.9
1952	116.0	127.8	134.4	110.2	115.9
1953	117.0	138.7	144.9	118.5	123.8
1954	114.0	141.3	148.0	123.9	129.8
1955	127.0	152.2	160.5	119.8	126.4
1956	127.2 (p)	162.5	172.3	127.8	135.5

n.a. Not available.

(p) Preliminary.

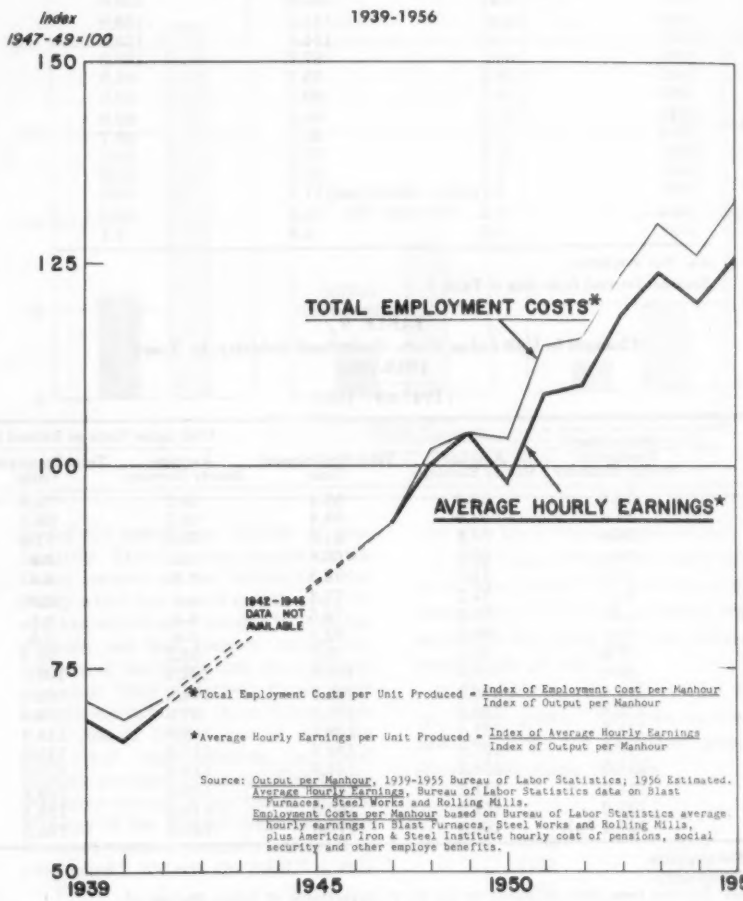
Sources: Derived from data published by the U. S. Department of Labor, Bureau of Labor Statistics and The American Iron & Steel Institute.

The consumer price index reached 114.1 in July 1952 and fluctuated within a very narrow range until the Spring of 1956. Certainly, during these most "recent years," the Union cannot claim that its insistence upon increases in wage and fringe benefits in excess of the rise in productivity were attributable to a rise in living costs. Despite the rise

Chart No. 7

CHANGES IN UNIT LABOR COSTS

1939-1956



*Total Employment Costs per Unit Produced = Index of Employment Cost per Manhour / Index of Output per Manhour

*Average Hourly Earnings per Unit Produced = Index of Average Hourly Earnings / Index of Output per Manhour

Source: Output per Manhour, 1939-1955 Bureau of Labor Statistics; 1956 Estimated.
Average Hourly Earnings, Bureau of Labor Statistics data on Blast Furnaces, Steel Works and Rolling Mills.
Employment Costs per Manhour based on Bureau of Labor Statistics average hourly earnings in Blast Furnaces, Steel Works and Rolling Mills, plus American Iron & Steel Institute hourly cost of pensions, social security and other employe benefits.

in steel prices between 1952 and 1955, the consumer price index remained about unchanged and hence could not have "robbed the workers of the wages they were already receiving," to use the words of the Union Brief. During the 1952-1955 period, steel productivity rose by 9.5 per cent while average hourly earnings increased by 19.1 per cent and labor costs per hour increased by 19.4 per cent. From 1952 to 1956, steel productivity rose by 9.7 per cent, average hourly earnings by 27.1 per cent, and labor costs per hour by 28.2 per cent.

This is a record of steel labor cost increases far in excess of gains in steel productivity despite the relative stability in living costs. The result was a rise in unit labor costs of 9.1 per cent between 1952 and 1955 and 16.9 per cent between 1952 and 1956 with the resulting pressure for steel price rises.

The Union concedes that "the Steelworker's standard of living has risen during the last few years. But the increases received—and more—could have been met from the gains in productivity." The data presented above show how misleading and inaccurate is this statement.

Steel Real Wages and Steel Output Per Manhour – A Meaningless Comparison

THE pressure exerted upon total steel costs is determined by the number of dollars expended by the industry for its labor costs—not by what its workers can buy with those dollars or his real wages. Thus, if the steel wages are increased to compensate for a rise in living costs (and productivity is unchanged), the net effect is an increase in steel unit labor costs even though there might be no change in the real wages of the worker. Pressure for a steel price rise will have developed as a result of this wage increase because it is changes in *money wages* which create the pressure for price rises regardless of what happens to real wages. No amount of double talk can change the inevitable operation of simple arithmetic.

Yet, to prove its point that labor cost increases did not lead to a rise in prices, the Union brief compares what it calls increases in "real productivity in steel" and in "real straight time average hourly earnings in steel." ("Facts On Steel," p. 29.) This is a completely meaningless comparison. Wage-productivity comparisons on a *national basis*—that is, for the entire economic system—are correctly drawn on a *real*-wage basis. At an industry (or company) level, wage-productivity comparisons—that is, using an industry's record of productivity and the real wages of its employees—are not very meaningful. This distinction was noted by the Steel Industry Board in the 1949 wage case when it stated:

> "The union's contention was based on the notion that, because the productivity index is a physical or 'real' one, the earnings index must be stated in similar terms. On this point we agree with the union. The difficulty is that there is in fact no available measure of labor's share in the increased physical productivity of any particular industry. It would be incorrect to do as the union urges, namely, to deflate the index of money average hourly earnings with the general cost-of-living index, which in part measures labor's (and other groups') contribution to the national output of all products and not only of steel. *It is only in respect to the economy as a whole that the real average hourly earnings of labor can validly be compared with an index of man-hour productivity; then both indices apply to all labor.*
>
> "In any event the companies were correct in contending that the union's emphasis on the change in man-hour pro-

ductivity from 1939 to 1948 and 1949 was misplaced. Because the rate of operation is such an important factor in productivity, valid comparisons can be made only for years of similar rates of operation, such as 1941 and 1948.

"Using as the proper base the period 1940-41 for comparison with the first quarter of 1949, and *finding that the rise in steelworkers' real hourly earnings approximately matched the rise in labor productivity for the economy as a whole during that period, we conclude that the union failed to establish that labor's share of the steel industry's output has become inequitable.*" *(Italics* added.)[1]

This conclusion is still true today.

The fundamental defect of comparisons between *real wages and productivity within an industry* is that such comparisons ignore the changing position of a company or an industry in the national economy. In a dynamic economy, the relative value of an industry's services, as reflected in the prices for its products or services, changes over time. Under some conditions, it may become more valuable; under other conditions, it may become less valuable. The consumer price index is a composite measure of prices, with some groups of prices changing less than the average while others change more. These price relationships, as well as productivity changes, must be kept in mind.[2]

Productivity increases in the steel industry do not indicate that real wages of steelworkers "can rise significantly without increasing steel costs or necessitating an increase in steel prices." ("Facts On Steel," p. 29.) The level of real wages for steel workers is determined by the relationship between changes in their *money wages* and in the *consumer price index*. It is not determined by changes in steel productivity and steel prices. As was indicated earlier (see pages 4 to 9), there has been no close relationship between changes in finished steel prices and in the consumer price index.

Steelworkers' Real Wages Have Risen More Than National Productivity

TABLE 10 shows real employment costs and real hourly earnings for the basic steel industry and productivity for the national economy from 1939 to 1956. The productivity data cover the private nonfarm sector of the economy. Table 11 shows the percentage changes to 1956 for each year since 1939. For example, the increase in productivity from 1940 to 1956 was only 38.0 per cent as compared with the increase of 54.6 per cent in steelworkers real average hourly earnings and 59.7 per cent in real average hourly earnings plus fringes. If the recommendation of the Steel Industry Board is followed and the 1940-41 average is used as the base for comparison the changes were as follows: (See Chart 8.)

	Per Cent Change 1940-41 to 1956
Real private nonfarm product per manhour	35.5
Steelworkers, real average hourly earnings	50.3
Steelworkers, real employment costs	55.6

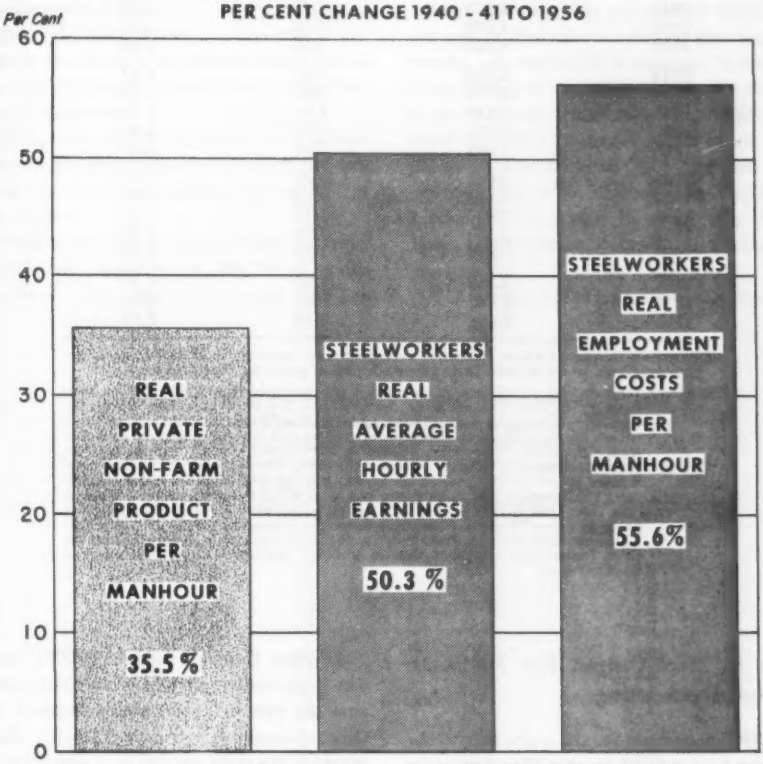
Real hourly earnings of steelworkers have far outstripped the rise in national productivity since the pre-World War II years. If pension and welfare gains are added to hourly earnings—as is appropriate—then the relative magnitude of the gains of steelworkers is even greater. As Table 11 shows, *regardless of which year since 1939 is used as a basis for comparison, steelworkers' wages have outstripped national productivity gains.*

[1] "Report to the President of the United States on the Labor Dispute in the Basic Steel Industry," by the Steel Industry Board, submitted September 10, 1949, pp. 44-45.

[2] Adapted from Jules Backman, "Wage-Productivity Comparison," *Industrial and Labor Relations Review*, October 1954, pp. 65-66.

Chart No. 8

REAL PRIVATE NON-FARM PRODUCT PER MANHOUR, STEELWORKERS' REAL AVERAGE HOURLY EARNINGS, STEELWORKERS' REAL EMPLOYMENT COSTS PER MANHOUR



Sources: Data on real private non-farm product per manhour from 1939-1952 are revisions by the Joint Committee on the Economic Report of estimates of John W. Kendrick, "National Productivity and Its Long-Term Projection," a paper before the Conference on Research in Income and Wealth, published in Long-Range Economic Projections, Studies in Income and Wealth, Volume Sixteen, National Bureau of Economic Research, 1954; The National Industrial Conference Board further revised the series by using later data from the Department of Commerce and Agriculture and by shifting the gross national product data from 1953 to 1947 prices; data for 1953-1956 were linked to those of prior years by using "Report of the Joint Economic Committee on the January 1957 Economic Report of the President," p. 48; wage data were obtained from the U. S. Department of Labor, Bureau of Labor Statistics; American Iron and Steel Institute.

TABLE 10

Real Private Non-Farm Product Per Manhour, Real Average Hourly Earnings and Real Employment Costs for the Basic Steel Industry—by Years—1939-1956

Year	Real Private Non-Farm Product Per Manhour	Real Average Hourly Earnings	Real Employment Costs*
	(in 1947 dollars)	(1947-49 dollars)	
1939	1.692	1.41	1.50
1940	1.778	1.40	1.49
1941	1.843	1.49	1.57
1942	1.828	1.46	1.54
1943	1.868	1.51	1.58
1944	2.010	1.54	1.61
1945	2.075	1.53	1.60
1946	1.940	1.53	1.59
1947	1.904	1.51	1.56
1948	1.969	1.54	1.59
1949	2.045	1.62	1.67
1950	2.172	1.64	1.80
1951	2.200	1.70	1.86
1952	2.251	1.75	1.90
1953	2.310	1.89	2.04
1954	2.359	1.92	2.07
1955	2.460	2.07	2.25
1956	2.453	2.18	2.38

* Based on Bureau of Labor Statistics average hourly earnings in blast furnaces, etc. plus American Iron and Steel Institute hourly cost of pensions, insurance, etc.

Sources: Data on real private non-farm product per manhour from 1939-1952 are revisions by the Joint Committee on the Economic Report of estimates of John W. Kendrick, "National Productivity and Its Long-Term Projection," a paper before the Conference on Research in Income and Wealth, published in *Long-Range Economic Projections*, Studies in Income and Wealth, Volume Sixteen, National Bureau of Economic Research, 1954; The National Industrial Conference Board further revised the series by using later data from the Department of Commerce and Agriculture and by shifting the gross national product data from 1953 to 1947 prices; data for 1953-1956 were linked to those of prior years by using "Report of the Joint Economic Committee on the January 1957 Economic Report of the President," p. 48; Wage data were obtained from the U. S. Department of Labor, Bureau of Labor Statistics; American Iron and Steel Institute.

Rise in Steel Output Per Manhour Is Not Accelerating

THERE is no basis for the claim that "Output per hour worked by each Steelworker is increasing at an accelerating rate." ("Facts On Steel," pp. 27, 29.) In fact, this is an amazing statement in light of the material contained in the Union brief itself. Thus, on page 28 of "Facts On Steel," it is stated that steel productivity "had risen by 167 per cent in 20 years [between 1919 and 1939], or at a rate approximately 5 per cent compounded annually over a period which included the Great Depression." In the following paragraph on the same page, it is claimed that in the 16 years since 1939, the annual rate of increase has been 3.2 per cent or lower than in the preceding twenty years.

The long term trend may be shown in terms of manhours required per unit of steel output. According to the Bureau of Labor Statistics,

the annual rate of decrease in this measure has been as follows for the indicated periods:

Years	Per Cent Annual Decrease
1919-1929	5.9
1929-1939	3.1
1939-1947	2.8
1947-1955	2.8

Source: U. S. Department of Labor, Bureau of Labor Statistics, "Man-Hours Per Unit of Output in The Basic Steel Industry, 1939-55," *Bulletin No. 1200*, September 1956, p. 6.

This tabulation shows a lower rate of decline in the number of manhours required in the war and postwar years than in the two preceding decades.

Thus, on a long term basis, it is clear that the rate of increase in steel productivity has been *decelerating* not accelerating as the Union claims.

What about shorter term trends? To prove shorter term acceleration, the Union states the rise in steel productivity since 1939 has been at the annual rate of 3.2 per cent, the increase in 1953-55 was at the rate of 4.2 per cent per year, and in the first quarter of 1956 it was 4.7 per cent higher than in 1955. ("Facts On Steel," pp. 28-29.) It also presents a chart on page 27 covering the 1947-1956 period. The Union bases its conclusion upon the unusual and relatively large increase in productivity in 1955 from the depressed level of 1954 and upon a projected rise of 4.7 per cent in 1956 based on alleged first quarter results. (At one point it assumes "a modest 4 per cent rise" in 1956—"Facts On Steel," p. 25.) Actually, the increase in steel productivity in 1956 is estimated to have been only 0.2 per cent rather than the 4.7 per cent projected by the Union. This is an excellent illustration of the danger in using very short term experience as a basis for projecting steel trends.

The annual rate of increase in steel produc-

TABLE 11

Per Cent Increase to 1956 from Preceding Years for Real Private Non-Farm Product Per Manhour, and Real Average Hourly Earnings and Real Employment Costs for the Basic Steel Industry

To 1956 From:	Real Private Non-Farm Product Per Manhour	Real Average Hourly Earnings	Real Employment Costs
1939	45.0	54.6	58.7
1940	38.0	55.7	59.7
1941	33.1	46.3	51.6
1942	34.2	49.3	54.5
1943	31.3	44.4	50.6
1944	22.0	41.6	47.8
1945	18.2	42.5	48.8
1946	26.4	42.5	49.7
1947	28.8	44.4	52.6
1948	24.6	41.6	49.7
1949	20.0	34.6	42.5
1950	12.9	32.9	32.2
1951	11.5	28.2	28.0
1952	9.0	24.6	25.3
1953	6.2	15.3	16.7
1954	4.0	13.5	15.0
1955	— 0.3	5.3	5.8

Source: Derived from data in Table 10.

tivity for the three year period, 1953-56, was 2.8 per cent or somewhat lower than the rate of increase for the entire war and postwar period. Clearly, the available data show a lower rate of productivity increase since 1939 than before that year.

Reported Rate of Increase in Output Per Manhour Is Overstated for Steel Industry

IN fact, the data reported by the U. S. Bureau of Labor Statistics *overstate* the actual rise in steel productivity in recent years. This situation has developed because the Bureau of Labor Statistics uses only hours for production workers in relationship to total output to measure the gains in productivity instead of using the total number of manhours for *all* workers in the industry. The latter is the appropriate comparative but unfortunately adequate data are not available to measure total manhours. Since the relative importance of production workers in the basic steel industry has been declining, the result is an overstatement of the rise in productivity in the steel industry in recent years. In its Report on Productivity in the Basic Steel Industry, the Bureau of Labor Statistics discusses this problem as follows:

> "The productivity trends described in this report are based on the employment and hours of production and related workers. As in many other industries, production workers have been declining relatively to all workers in recent years. According to BLS statistics, the proportion of production worker employment to total employment in the steel industry remained fairly constant between 1939 and 1947, at 88.0 and 87.9 per cent, respectively. However, the proportion dropped to 85.7 per cent between 1947 and 1955.[1] Consequently, *the number of employees per unit of output declined less than the number of production workers per unit of output, from 1947 to 1955.*
>
> "It would be desirable to construct measures of productivity using the hours of *all* employees in order to study the change in total manpower requirements of an industry, and to compare the results with trends for production workers alone. However, man-hours for nonproduction workers are not generally available. In an effort to obtain some general indications of trend, two experimental measures have been constructed, by combining the man-hours of production workers with the estimated man-hours (employment multiplied by estimated weekly hours) for other employees. In one measure, the weekly hours of other employees were assumed to be the same as for production workers; in the other, a constant 40-hour workweek was assumed for other employees.
>
> "The two assumptions about weekly hours yield approximately the same results. Using 1947 as a base (i.e. 1947=100) an index of unit man-hours for production workers would be 127.3 in 1939, compared with 125.3 for all employees assuming a 40-hour week, and 123.9 assuming the same work-week as production workers. In 1955, the unit man-hour index for production workers would be 78.1 compared with 79.6 and 80.0 for all employees depending on concept of hours worked for all employees."[2] (*Italics* added)[3]

If we convert the unit manhour indexes

[1] *Source:* For 1950-55, BLS Employment and Earnings, Annual Supplement Issue, June 1956; for earlier years, summary sheet for blast furnaces, steel works, and rolling mills, 1932-50, February 1953. Census figures for 1939 and 1947 show proportions of 89.1 and 87.5 per cent, respectively. Statistics of the American Iron and Steel Institute (AISI) reveal a greater trend toward employment of other than production workers. These data indicate that 'employees receiving wages comprised 88.1 per cent of the work force in 1939, 85.3 per cent in 1947, and 83.1 per cent in 1955.

[2] "AISI man-hour data for all employees and for 'employees receiving wages' showed similar differences. The hours of 'other' employees are generally scheduled hours reported to the AISI."

[3] *Source:* U.S. Department of Labor, Bureau of Labor Statistics, *Man-hours Per Unit of Output in the Basic Steel Industry 1939-55*, Bulletin No. 1200, September 1956, U.S. Government Printing Office, Washington, D. C., pp. 16 and 17.

cited above into output per manhour, the rise in productivity on the basis of production worker manhours alone was about 62 per cent from 1939 to 1955 as compared with an increase of 55.0 per cent to 57.5 per cent when *all manhours* are used. As the Bureau of Labor Statistics indicated, this difference has developed since 1947. In 1956, there was a decrease in productivity based on all manhours as compared with an increase of 0.2 per cent based on production worker manhours alone.

The proper basis for determining changes in output per manhour is to relate total output to the total number of manhours of all workers—in the mill, in the office, in the sales department, in the research laboratory, etc. All employees in a company or in an industry contribute as a team to the productivity gains achieved. It is all the manhours combined with the contributions of capital investment and the efforts of management which yield the productivity achieved.

The Bureau of Labor Statistics has pointed out:

> "Man-hours per unit of output (and its reciprocal, output per man-hour) measures the relationship between one factor of input—labor time—and production in physical units. This productivity ratio does not measure the specific contribution to output of labor or of capital or of any other factor of production. Changes in the ratio may reflect the joint effect of a large number of separate, though interrelated, influences, such as technological improvements, the rate of operation, the relative contributions to production of plants at various levels of efficiency, the flow of materials and components, as well as the skill and effort of the work force, the efficiency of management, and the status of labor relations."[1]

When allowance is made for the increase in the relative importance of nonproduction worker manhours, the conclusion is reinforced that the Union is in error in its assertion that productivity has been increasing at an accelerated rate in recent years.

This review of trends in labor costs and productivity makes it evident that the tremendous rise in steel labor costs during the war and postwar years could not be met out of rising productivity. On the contrary, labor costs have outstripped productivity by such a wide margin that there has been considerable pressure for price increases.

[1] *Ibid.*, pp. 1 and 2.

V. STEEL PRICE INCREASES AND WAGE INCREASES

THE Union brief alleges that since 1945, the steel industry has increased steel prices $3.19 for every $1 increase in steel wages and that these "unjustifiably big price increases" have yielded the industry "a bonanza from steel price increases out of all proportion to increased costs." ("Facts On Steel," p. 8.) The alleged "Total Gain" as a result of these price increases is $3,914.0 million (pp. 8, 31 to 35).

This fantastic statement, which implies that the steel industry has made tremendous profits as a result of large increases in labor costs in the postwar period, has no relationship to reality. For example, this alleged gain of $3,914.0 million from price rises for finished steel is almost double the profits before taxes of $2,038.5 million for the 25 companies (p. 9). And part of these latter profits before taxes represented earnings on coal, shipbuilding, cement, and other activities included in the steel industry sales and profits totals. The fantasy that underlies this claim by the union is readily exposed by examining the impact on the industry's profits figures if these price increases were eliminated or if they were limited to other objectives concerning profits which the Union seems to approve. This analysis is based on the data shown on page 33 of "Facts On Steel" in comparison with the AISI profits data adjusted as indicated below. (See Appendix A.)

According to the Union's claim, the price of finished steel was $122.45 ($55.20 in 1945 plus $67.25 increase). This was 121.8 per cent higher than in 1945. Actually this rate of increase is on the high side because the $55.20 figure for 1945 did not include extras. This price was used by the Union to determine the alleged gain of $5,697.2 million in revenues for the entire industry as a result of the increase in prices. The BLS index of finished steel prices rose by 120.5 per cent from 1945 to December 1955. The companies in the AISI survey accounted for 93.7 per cent of the shipments of finished steel in 1955. On this basis their gain in revenues flowing from higher prices was $5,338.3 million (93.7 per cent of $5,697.2 million).

The total value of finished steel shipments on this basis for all companies would have been $10,373.7 million ($122.45 times shipments of 84,717,444). The AISI sample would have had 93.7 per cent of this volume or $9,720.2 million. It must be recognized, of course, that the precise total would have varied depending upon the composition of sales but the data are useful as a rough measure of the relationships to be discussed. Moreover, this total probably understates the receipts from finished steel shipments since the actual price appears to have been moderately higher than $122.45 which price does not include all extras.

The AISI companies had total receipts of $14,049.3 million. After deducting estimated finished steel receipts of $9,720.2 million, the revenues from other activities would have equalled $4,329.1 million.

If it be assumed that the profitability of finished steel sales and of other sales was the same percentage, then the profits would have been divided as follows:

	Before Taxes	After Taxes
	(millions of dollars)	
Finished Steel	1,526.1	758.2
Other Activities	677.4	340.4
Total	2,203.5	1,098.6

If the AISI sample accounted for 93.7 per cent of the labor costs, their increase in labor costs would have been $1,670.8 million (93.7 per cent of $1,783.2 million) for finished steel products between 1945 and 1955.

On the basis of the above data several interesting comparisons can be made to show

the underlying fallacy in the Union's claim concerning the magnitude of the alleged gains from price rises. *It must be emphasized that these are rough approximations rather than precise calculations and are intended primarily as a framework of reference against which to measure the significance of the allegations in the Union Brief.*

1. Price Rise to Cover Only Direct Steel Labor Costs

LET us assume first that finished steel prices by 1955 had increased only enough to cover the higher steel labor costs since 1945. The profits record in 1955 would have been as follows:

	Millions of Dollars
Revenues from price increases	5,338.1
Subtract increase in employment costs	1,670.8
Alleged gain according to Union formula	3,667.3
But total profits before taxes in 1955 were only	1,526.1
Therefore, if the yield from the price rise had only been equal to the rise in employment costs, the companies would have shown a net loss of	2,141.2

Thus, if prices had risen by 37.7 per cent above the 1945 level or enough to cover only the direct labor costs incurred in producing finished steel, the steel industry would have experienced a loss in excess of $2.1 billion in 1955—assuming, of course, that all the other increases in costs would have been incurred under these conditions. It must be recognized that under the assumed conditions, employment costs could not have been increased as much as they have been, that expansion in capacity would have been impossible, and that the steel industry would probably be bankrupt. These data also provide an answer to Otis Brubaker's (steelworkers' economist) astounding statement before the Congressional Joint Economic Committee on January 31, 1957 that "Wage increases in steel have *not caused* even *a single* steel price increase since the formation of the Steelworkers Union 20 years ago." In "Steel and the National Economy," the Union stated "Experience has proved that wage increases have not caused inflation, that wages can be increased without prices being raised . . ." (p. 1). Certainly there has been no such "experience" in the steel industry. Despite large gains in productivity and the economies attending an expanding volume of production, a rise of 37.7 per cent in prices would have been required to cover only the *direct* labor costs in the steel industry.

2. Price Rise Required to Break Even In 1955

HOW much of a price rise would have been required to enable the industry to break even —no profits and no losses—in light of all the cost increases which were incurred during this 10 year period? The following data tell the story:

	Millions of Dollars
Revenues from price increases	5,338.1
Profits before taxes	1,526.1
Revenue from price rise required to break even	3,812.0

In order to meet the higher labor and other costs since 1945, it would have been necessary to use up all profits before tax in that year and in addition obtain a price rise which yielded revenues of $3,812 million. It must be emphasized that many of these other cost increases reflect higher labor costs for coal, iron ore, railroad transportation, and other goods and services used by the steel indus-

try. As is discussed elsewhere, these other costs have risen sharply. To obtain additional revenues of $3,812.0 million would have required a price rise of 86.0 per cent instead of 120.5 per cent—and the industry would still have had no profits.

3. Price Rise Required if Steel Profit Margin Had Declined as Much as That for All Manufacturing Industries

THE Union briefs cite the decline in the profit margin in all manufacturing industries as a more favorable development than the changes in steel ("Facts On Steel," pp. 8 and 23; "Steel and the National Economy," pp. 2, 14, 15). The reasons why there is no relationship between these trends in all manufacturing and in steel is discussed in a later section. What would the impact on steel prices have been if the trend of steel profit ratios had paralleled those in all manufacturing industries. All manufacturing profits declined from 5.7 per cent to 4.3 per cent of the sales dollar or by 24.6 per cent between 1947 and 1956 (p. 8). If the steel profit ratio had shown a parallel decline it would have been reduced from 6.1 per cent in 1947 to 4.6 per cent or 3.2 percentage points lower than the actual rate in 1955.

It should be emphasized that in an industry like steel, expansion in volume during periods of recovery should be accompanied by *increasing not decreasing profit margins.* This is so because the steel industry requires heavy capital investment and uses much specialized equipment. As volume expands, this equipment can be used more efficiently and thus there is a decline in unit costs. The industry then experiences the full benefits of mass production.

Nevertheless, we are testing the results that would have taken place in terms of the theory in the Union's brief. Profits before taxes would have been lower by 6.4 per cent of estimated sales of finished steel. To state it differently, a price rise of 106.4 per cent would have been required to earn this smaller ratio of profits postulated by the Union. If prices had risen by 106.4 per cent, steel prices prevailing at the end of 1955 would have been 6.4 per cent lower.[1] This means that every price increase between 1945 and 1954 would have had to take place but that only the increases in 1955 would have been unnecessary. This is particularly interesting because the Union has been insisting throughout the postwar period that wages could be raised without the need for a price increase. Yet every one of these earlier and allegedly unnecessary price increases were required in order to meet even the low profit goal apparently set by the Union.

4. Price Rise Required if Steel Profit Margin in 1955 Remained the Same as in 1947

IN 1947, the year used as a base by the Union in most of its comparisons, steel profits were equal to 6.1 per cent of the sales dollar. If this ratio had prevailed in 1955, how much of a price rise would have been required since 1945. Profits after taxes as a percent of the steel sales dollar would have been 1.7 percentage points lower than was actually earned. Profits before taxes would have been 3.4 percentage points lower. The price rise would have had to be 113.1 per cent instead of 120.5 per cent. On this basis, steel prices would have been 3.4 per cent lower than the level that actually prevailed.[2] This means that every price rise from 1945 to 1954 would

[1] On the basis of the 1956 results, the profit margin would have been 2.7 percentage points lower and the level of steel prices would have been about 5.4 per cent lower than the level prevailing.

[2] On the basis of the 1956 experience, the profit rates would have been 1.2 percentage points lower and steel prices would have been 2.4 per cent lower than the level that actually prevailed.

have been necessary plus about half of the increase in steel prices in 1955.

In light of the relationships described above, it is evident that there is no basis for the Union's statement that price increases have yielded a "bonanza" nor its implication that the gain has equalled almost $4 billion. Nor is there any support for its charge that "the record high profits result in part from increased productivity and in part from higher steel prices charged by the steel companies for their products. . . . Actually, those presumed 'costs' have already been *absorbed* by productivity gains and by high level operations." ("Facts On Steel," p. 12.) Clearly, productivity and high level operations did not absorb cost increases since 1945. The combination of these two factors together with an 86.0 per cent increase in prices would not have covered all cost increases and would have required a wiping out of 1945 profits before taxes.

Even in terms of the so called "standards" used in the Union brief, the question boils down to whether steel prices might have been 3 per cent to 6 per cent lower than actually prevailed at the end of 1955.[1] This is a far different question from that which is implied in the use of descriptions such as "unjustifiably big price increases"; "inordinately large Price increases" ("Facts On Steel," pp. 8 and 29); "highly arbitrary and inflationary pricing policies"; "skyrocketing steel prices," etc. ("Steel and the National Economy," 1956, pp. 2, 15.) Note, we are not saying that steel prices should have been 3 per cent to 6 per cent lower. Rather, that is the total reduction that would have been necessary if the highly unrealistic profits standards in the Union brief were followed.

Any yield from a price rise which would enable the steel industry to recover more than its increase in labor costs after allowing for productivity gains is considered by the Union to contribute to profits. Wage costs are an important element in total costs in the steel industry and changes in total costs are considered when making price adjustments. However, other factors also have been important. Among those which may be cited are: the desire to earn a fair return on investment, the need for funds for expansion, strong demand for steel which is reflected in an ability of customers to pay higher prices, and changes in the prices of substitute products.

The combination of factors which will be important at any one time varies. But it is doubtful whether there is any time when wage costs alone determine steel prices. In fact there are many times when steel prices may be changed even though wages have not been changed. The increases in the late fall of 1955 and decreases during the Thirties may be cited as illustrations. Changes in wages certainly may influence the *timing* of price changes—but not their magnitude. The union in its attempt to forge a wage-price chain of causation has misrepresented the price making process in the steel industry.

[1] On the basis of the 1956 experience, these figures would be 2.4 per cent to 5.4 per cent.

VI. DISTRIBUTION OF THE STEEL SALES DOLLAR

THE Union offers a breakdown of the steel sales dollar to support its charge that profits have increased excessively, that wages have been lagging, and that raw material costs have failed to rise as much as finished steel prices. The data presented on pages 20 to 24 of "Facts On Steel" are for varying numbers of companies and cover only selected years. Comparisons are made primarily with 1939 and 1947 and no data are given for the other years between 1939 and 1950. No effort is made to relate the experience in 1955 with years of comparable volume.

Table 12 shows the distribution of the sales dollar for the steel industry (AISI data) from 1939 to 1956 with the shares accounted for by employment costs, material costs and profits before and after taxes. The table also shows the ratio of steel operations to capacity. The distribution of the sales dollar in any year is affected significantly by the relative level of production. In years of low production, profit margins tend to be low as a percent of sales and employment costs tend to be high; in years of high operations, these relationships are reversed. For the purposes of this analysis, the World War II years are ignored because of the many government controls and special factors which distorted normal relationships during that period. Excluding those years, volume has been in excess of 90 per cent of capacity in six years in addition to 1955, namely, 1941, 1947, 1948, 1950, 1951, and 1953. It is fruitful to examine the distribution of the sales dollar in those years in order to determine the significance of 1955 relationships.

TABLE 12

Steel Industry: Employment Costs, Products and Services, Profits Before and After Taxes as Percent of the Sales Dollar, and Operating Rates—1939-1956

Year	Operating Rate (% of capacity)	Employment Costs	Products and Services (Material Costs)	Profits Before Taxes	Profits After Taxes
1939	64.5	39.0	44.3	6.4	5.1
1940	82.1	36.6	43.7	10.7	8.0
1941	97.3	34.1	44.9	14.0	6.0
1942	96.8	38.0	42.9	12.5	3.3
1943	98.1	40.1	44.8	9.0	2.9
1944	95.5	41.3	45.1	7.2	2.7
1945	83.5	40.8	46.6	5.1	3.1
1946	72.5	41.2	45.2	8.3	5.5
1947	93.0	36.7	47.7	10.3	6.1
1948	94.1	34.9	48.4	11.4	6.6
1949	81.1	35.0	47.3	12.2	7.1
1950	96.9	33.0	45.7	16.2	8.1
1951	100.9	32.3	46.3	16.5	5.7
1952	85.8	34.9	49.8	9.5	5.0
1953	94.9	34.0	46.3	13.2	5.6
1954	71.0	36.7	43.2	11.6	6.0
1955	93.0	33.5	43.6	15.7	7.8
1956	89.8	33.3	45.8	14.2	7.3

Source. American Iron and Steel Institute.

Employment Costs

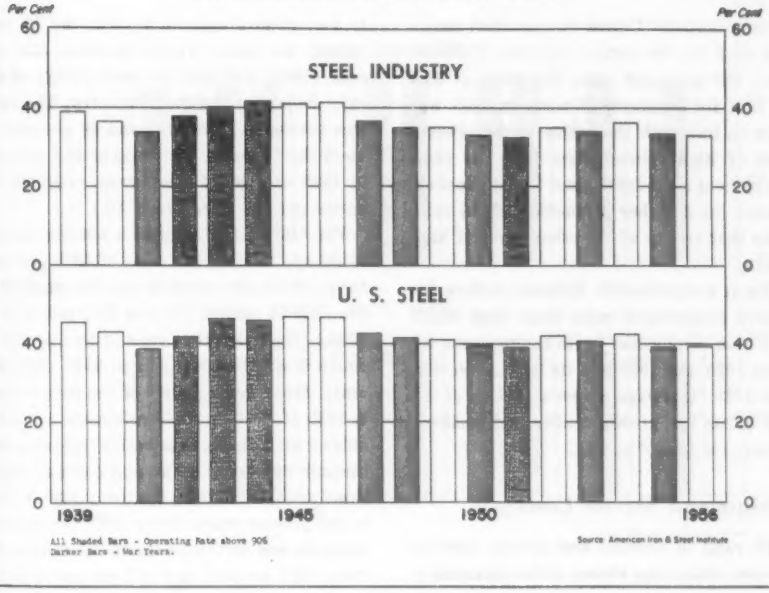
DURING the seven years of high level activity, employment costs ranged between 32.3 per cent and 36.7 per cent of the steel sales dollar. The ratio of employment costs to sales in 1947—the year used as a base period by the union—was 36.7 per cent, the highest prevailing in any year in which steel operations exceeded 90 per cent of capacity. In no other nonwar year of high level operations was the ratio as high as 35 per cent. In every year in which the operating rate fell below 90 per cent of capacity, except 1956, the ratio of employment costs to sales was higher than it was in 1955. (See Chart 9.)

On page 24 of "Facts On Steel," it is stated that "Wages and salaries and material costs, have moved downward. Profits, not the consumers, have benefited." This conclusion is derived largely by comparing 1955 results with those reported in 1947 and 1939. Obviously, it is a conclusion that would have little meaning and could find no support if the comparisons were made properly with other years of high level activity other than those affected by World War II. The ratio of employment costs to sales for the steel industry was moderately higher in 1955 than in 1950 and 1951 and fractionally lower than in 1941 and 1953, the other years of high level steel activity.

Chart No. 9

EMPLOYMENT COSTS

AS A PERCENT OF THE SALES DOLLAR



All Shaded Bars - Operating Rate above 90%
Darker Bars - War Years.

Source: American Iron & Steel Institute

TABLE 13

Employment Costs, Products and Services Bought, Profits Before and after Taxes as Percent of Sales Dollar, and Operating Rates, United States Steel Corporation, 1939-1956

Year	Operating Rate (% of Capacity)	Employment Costs	Products and Services Bought	Profits Before Taxes	Profits After Taxes
1939	61.0	45.7	34.7	6.4	4.9
1940	82.5	43.0	33.2	11.9	9.5
1941	96.8	38.7	37.2	14.5	7.2
1942	98.1	42.0	36.2	12.0	3.8
1943	97.8	46.3	37.0	7.5	3.2
1944	94.7	46.0	39.1	6.0	2.9
1945	82.0	47.2	38.4	5.0	3.3
1946	72.9	47.1	37.5	8.0	5.9
1947	96.7	42.6	39.5	10.3	6.0
1948	93.8	41.7	40.7	9.6	5.2
1949	82.5	41.1	38.5	12.7	7.2
1950	98.2	39.9	37.8	15.2	7.3
1951	101.3	39.0	37.7	16.5	5.2
1952	85.0	42.1	41.7	8.3	4.6
1953	98.4	40.6	36.7	14.2	5.8
1954	73.2	42.7	34.9	11.8	6.0
1955	90.8	39.4	33.1	17.9	9.0
1956	85.2	38.7	35.2	16.0	8.2

The trend for United States Steel paralleled that for the entire industry. Table 13 shows the pertinent data. The ratio of 39.4 per cent for employment costs in 1955 was about in line with the ratios in the other 6 years of high volume since 1939. In 1947, employment costs for United States Steel accounted for a higher proportion of the sales dollar than in any of the other years of high volume.

This is a significantly different picture for relative employment costs from that which the Union emphasizes in its comparisons between 1939 and 1955 and its conclusion that since 1939 "the wage earner's portion of the sales dollar has grown smaller and smaller" ("Facts On Steel," p. 23).

Product and Service Costs

THE ratio of *product and service costs* to the sales dollar has shown little relationship to the level of operations. For the 18 year period, the ratios varied between 42.9 per cent (1942) and 49.8 per cent (1952) of the sales dollar for the steel industry. The ratio was between 43 per cent and 46 per cent in 10 of the 18 years. The ratio of 43.6 per cent in 1955 was close to the lowest ratio for the entire period. (See Chart 10.)

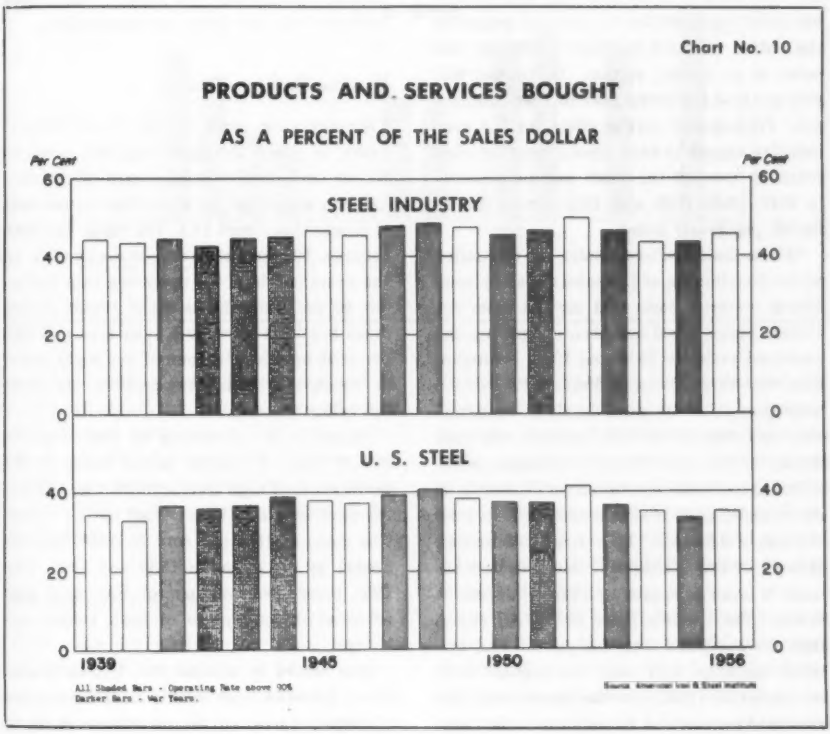
For United States Steel a similar picture is shown. In 1955 the ratio of 33.1 per cent for products and services was the smallest in the 1939-56 period. (It was 35.2 per cent in 1956.) The only other year in this period in which it was that low was in 1940 (33.2 per cent). However, a review of the record prior to 1939 (for which similar data are not available on an industrywide basis) indicates that through most of the war and postwar years, these ratios have been relatively higher than in the prewar years. Since 1939, the ratio of products and services to sales has ranged between 33.1 per cent and 41.7 per cent and has

Steel Prices, Profits, Productivity, and Wages

been 37.0 per cent or higher in 11 out of 18 years. In contrast, from 1925 to 1929, the ratio ranged between 31.9 per cent and 33.6 per cent. During the 1930's, excluding 1932 and 1933, the range for United States Steel was between 28.3 per cent and 37.4 per cent.

The Union document states that "as a direct result of the inflation which followed the weakening of price controls," the ratio of material costs to sales rose until 1947 and "since then they have dropped sharply reaching lows . . . in 1954 and . . . in 1955." ("Facts On Steel," p. 24.) It fails to recognize that the effects of the acknowledged inflation in costs resulted in a disproportionately high proportion of the sales dollar being used for that purpose throughout most of the war and postwar period. The changes since 1947 and 1948 have brought the materials cost ratio to the sales dollar back to the levels which prevailed before World War II.

The year 1947, used for comparative purposes to show relatively declining materials costs, was the year when the ratio was close to its peak "as a direct result of the inflation" in the early postwar period. If the 1955 experience is compared with 1939 or 1940, the last of the prewar years ("Facts On Steel" shows only the 1939 data, see pages 23 and 24), it is clear that profits have not risen because of a



decline in the relative importance of material costs. Such a conclusion can be reached only by a carefully selected comparison with the postwar year, namely 1947, when the ratio was close to its peak. Such a comparison is completely devoid of significance.

The fact that material costs as a percentage of the sales dollar in 1955 approximated the prewar relationship means that the total costs of products and services have risen about in line with the increase in total revenues of the steel industry since 1939 or 1940. Increasing output usually requires an increasing volume of products and services, except to the extent that the total is affected by technological change. It follows, therefore, that the rise in the unit costs of these products and services has about equalled the rise in steel prices for the entire war and postwar period, as was noted in an earlier section. Of course, this was not true for every year to year comparison. Product and service costs for the steel industry appear to have risen more than steel prices in most of the years and particularly in 1947, 1948, 1949, and 1952 due to the inflation previously noted.

"Facts On Steel" concludes its discussion of the distribution of the sales dollar by combining material costs and payroll costs for United States Steel and then comparing the combined ratios in 1947 and 1955. It emphasizes that there was a decline by 1955 of 9.6 cents per dollar of sales in these combined costs and claims that "This decline was used largely by the corporation to increase profits before taxes which accounted for 11.5 cents of the sales dollar in 1947 and 18.0 cents in 1955 —a rise of 6.5 cents." Here is an outstanding example of the technique of selecting base periods in order to create a picture of excessive profits. The Union's Table 13 (p. 24) shows that the combined total for payroll and material costs in 1947 was the highest with one exception (1952) for the years listed. The combined payroll and material costs for United States Steel in 1929 was 69.3 per cent; in 1930 it was 73.2 per cent. In contrast, the 1947 ratio was 82.1 per cent.

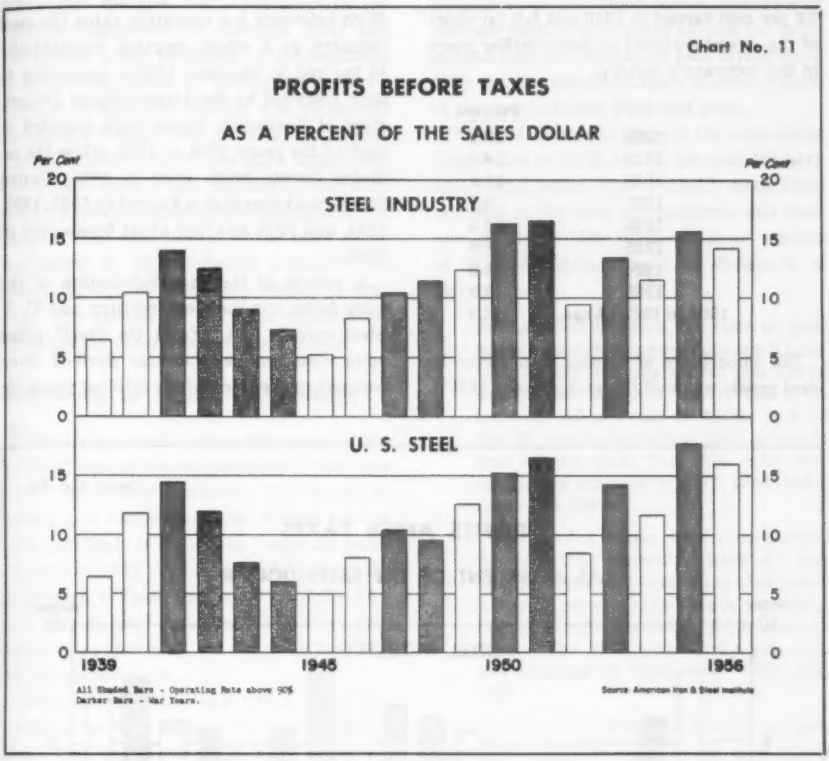
It was shown earlier that the ratio of material costs in 1947 was one of the highest in the postwar period and, therefore, not representative of the relationship which has prevailed in the past. Moreover, throughout most of this period, material costs have taken a disproportionately large share of the sales dollar in terms of past experience. Similarly, it was shown that the labor costs were a relatively higher share of the sales dollar in 1947 than usually prevails in years of high volume like 1955. Under these conditions, the combined total in 1947 would be far above any normal relationship and hence comparisons between 1947 and 1955 are meaningless.

Profits Before Taxes

IN every year, excluding the World War II years, in which the operating rate exceeded 90 per cent, profits before taxes of the steel industry accounted for more than 10 per cent of sales. (See Chart 11.) The range has been between 10.3 per cent and 16.5 per cent. In the years in which the operating rate fell below 90 per cent, the range of profits before taxes has been between 6.4 per cent and 14.2 per cent of sales. In four of the eight years in which that situation prevailed, the ratio fell below 10 per cent.

Again, it is interesting to note that the lowest ratio of profits before taxes in the seven years of high level activity was in 1947, the year used as a base period by the Union. The ratio of 15.7 per cent in 1955 was exceeded by the ratios in 1950 and 1951. The 1955 record was not out of line with that achieved in past years of high volume activity.

The record is similar for United States Steel. Years of high volume have been years of higher ratios of profits before taxes to



sales than years of low volume. The record in 1955 was more favorable than in the other six years of high volume since 1939. (However, the ratio in 1955 fell short of the 19.6 per cent on sales earned in 1929 and of the ratios in many of the earlier years in United States Steel's history.)

Profits after Taxes

THE data for *profits after taxes* for the steel industry show a range of 5.6 per cent to 8.1 per cent in the seven years in which operations exceeded 90 per cent of capacity. The ratio of 7.8 per cent in 1955 was exceeded by the 8.1 per cent ratio in 1950. In most of the other years of high level operations, the ratio was around 6 per cent. In three years of below 90 per cent of operations, profits after taxes accounted for more than 7 per cent of the sales dollar: 8.0 per cent in 1940, 7.1 per cent in 1949, and 7.3 per cent in 1956. (See Chart 12.)

United States Steel profits after taxes in years of high volume since 1939 have ranged between 5.2 per cent and 9.0 per cent. The highest ratio was recorded in 1955. However, this rate of profits was a little lower than the

9.5 per cent earned in 1940 and fell far short of the record achieved in many earlier years in the company's history.

	Per Cent
1930	12.6
1929	18.0
1928	11.4
1927	9.2
1926	10.8
1925	8.9
1924	9.2
1923	9.9
1902 to 1922 (Avge.)	13.9

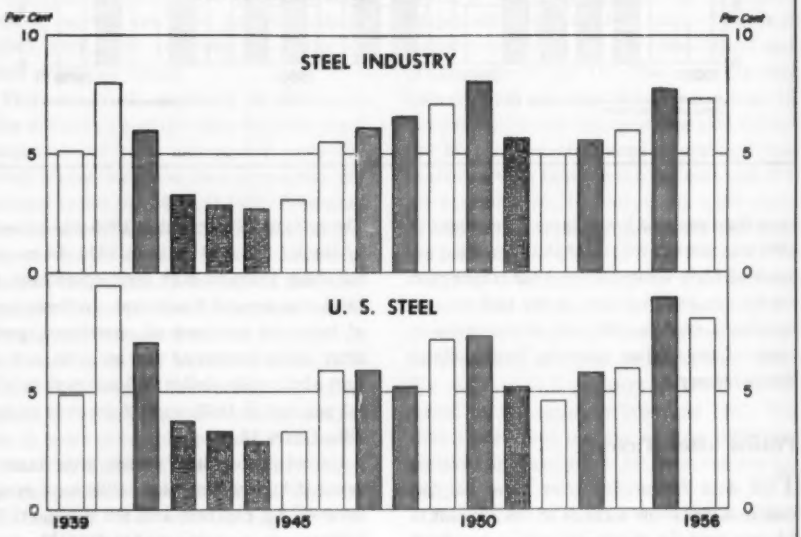
The importance of volume as a factor in steel profits was well illustrated in the 1930's. With relatively low operating rates, the steel industry as a whole operated substantially in the red in the early 1930's. According to data compiled by the United States Department of Commerce, losses were reported in each of the years 1931 to 1933, while the industry barely broke even in 1938. United States Steel operated in the red in 1932, 1933, 1934, and 1938 and just about broke even in 1935.

A review of the past distribution of the sales dollar for the steel industry and U. S. Steel reveals that "Facts On Steel" relies upon distorted relationships derived from comparisons with carefully selected years. To

Chart No. 12

PROFITS AFTER TAXES

AS A PERCENT OF THE SALES DOLLAR



prove that declines had taken place in the relative importance of material costs and labor costs, it was necessary for the document to ignore the impact of inflation on material costs (although the inflation was recognized as being a factor) and the effect of volume upon the proportion of the sales dollar used for employment costs. Similarly, the relationship between high volume and profits was ignored. The distribution of the sales dollar prevailing in 1955 reflected primarily the record volume of sales and output in that year. The pattern did not differ significantly from that in other years of high volume.

Dividends to Steel Stockholders

THE Union brief claims that steel stockholders "have fared extremely well" and have been "handsomely rewarded." To support its position, it claims that the annual rate of cash dividends in 1956 was "some 25 times the level of 1939" and in 1955, 21½ times the 1939 level. ("Facts On Steel," pp. 8, 15, 16.) It is also claimed that since 1947, steel dividends have increased 1.8 times as much as for all corporations.

The brief contains data which show how meaningless such comparisons are. Thus, it notes that only 7 out of 23 steel companies paid cash dividends to their common stockholders in 1939. In light of the very poor profits position of the steel industry in 1939, it is not surprising that fewer than one company out of three could pay dividends.

It is difficult to believe that the Union seriously offers the 1939 experience as a satisfactory base period against which to measure the significance of 1955 or 1956 results. Of course, more steel companies paid dividends in 1955 than in 1939. And of course, they paid higher dividends than in that depressed year. It would be amazing if they had not done so. Incidentally, in 1955 total steel dividends were 7.5 times as large as in 1939, not 21½ times as the Union shows. This rate of increase must be considered against the background that few companies paid dividends in 1939 and the sixfold increase in sales volume in the steel industry since that year.

Table 14 shows the share of the sales dollar distributed as dividends by the steel industry and United States Steel annually since 1939. Included in the total are preferred and common dividends. The relatively small portion of the sales dollars paid as dividends is evident.

> For the *steel industry*, the ratio of dividends to sales has ranged between 2.1 per cent (in the war years 1943 and 1944) and 3.8 per cent (in 1940). The ratio has been 3.0 per cent or higher in 8 of the 18 years—including 1955 when it was 3.1 per cent. The 1955 ratio was equalled or exceeded in 1940, 1946, 1950, 1954, and 1956.
>
> For *United States Steel Corporation*, the ratio has ranged between 2.7 per cent and 4 per cent (excluding 1940 when it was 5.6 per cent). In 7 years, including 1956, the ratio has been 3.5 per cent or higher. The 1955 ratio of 3.6 per cent was exceeded in 1940, 1946, 1950, and 1956.

The fact is that there has been no marked upward trend in the share of the sales dollar paid as dividends during the 1939-56 period. Rather, the ratio has tended to move sidewise within a range of about 1.5 percentage points during the period. These data do not support the inference that dividend payments were unusually high when the volume of business is considered.

Dividends: Steel Companies and All Corporations

THE Union complains that 1956 steel dividend payments (based on the first quarter results), had increased 223.1 per cent since 1947 as compared with an increase of only

TABLE 14

Dividends as Per Cent of Sales Dollar
1939-1956

Year	Steel Industry	U. S. Steel
1939	2.5	3.0
1940	3.8	5.6
1941	3.0	3.7
1942	2.4	3.2
1943	2.1	3.1
1944	2.1	2.9
1945	2.4	3.4
1946	3.1	4.0
1947	2.7	3.3
1948	2.5	3.1
1949	3.0	3.5
1950	3.3	4.0
1951	2.6	2.9
1952	2.9	3.3
1953	2.5	2.7
1954	3.2	3.4
1955	3.1	3.6
1956	3.3	4.0

Source: American Iron and Steel Institute and United States Steel Corporation.

80.0 per cent for all corporations ("Facts On Steel," p. 8). From 1947 to 1955, the alleged increases were 176.9 per cent and 72.3 per cent respectively ("Facts On Steel," p. 50). Such comparisons are not meaningful because they ignore the lack of comparability in 1947, the base year for comparison, the difference in coverage of the two series, and the greater rate of increase in steel industry sales as compared with that for all corporations.

The data for all corporations include dividends on common *and* preferred stock while the steel industry data used by the Union cover *only* common stock. Because of the greater stability of dividends on preferred stock, it would be anticipated that a total including such dividends would fluctuate *less* than the more volatile dividends on common stock. Unfortunately, there is no breakdown between dividends on common and preferred stock for all corporations. Hence, the only way the two series can be compared is by including dividends on preferred stock in the steel dividend total. When the comparison is made on this basis—even for the period used by the Union—the results are substantially different from what the Union shows. For the steel industry, the increase between 1947 and 1955 becomes 137.6 per cent (from $184.2 million in 1947 to $436.5 million in 1955) instead of 176.9 per cent as alleged by the Union.

This is still a greater rate of increase than that of 72.3 per cent for all corporations during the same period. However, sales also rose more sharply for the steel industry as the following figures show:

	Sales in Billions of Dollars		
	1947	1955	% Increase
All corporations	347.8	557.0	60.1
All manufacturing corporations	177.8	289.8	63.0
Steel industry	6.7	14.0	109.0

Between 1947 and 1955, sales in the steel industry increased by 109.0 per cent as compared with a rise of 60.1 per cent for all cor-

porations. In light of this substantially greater increase in sales what is so unusual about the fact that dividends also rose more in the steel industry in the same period? Certainly, the Union cannot mean that expanding volume should not be accompanied by higher earnings and in turn higher dividends? With a 60.1 per cent increase in sales, *all corporations* have increased dividend payments by 72.3 per cent or about one-fifth more. With a 109.0 per cent increase in sales, *steel companies* have increased dividends by 137.6 per cent or about one-fourth more. Certainly, this is not a wide discrepancy in experience as alleged by the Union. The Union obtained its conclusion by failing to use comparable data and by failing to note the greater expansion in steel sales.

VII. PROFIT MARGINS AND PRICE POLICIES IN OTHER INDUSTRIES

THE Union briefs cite with approval the decline in profit margins for all manufacturing industries from 5.7 per cent in 1947 to 4.3 per cent in the first quarter of 1956, a period during which steel profit margins rose. It is then stated that "Steel is out of step with the rest of the economy." In effect this statement suggests that steel profit margins should have followed a pattern similar to that for all manufacturing industries. ("Facts On Steel," pp. 8 and 23; "Steel and the National Economy," pp. 2, 14, and 15.) It is also stated that "The contrast between the price policies of the steel industry and price policies of all manufacturing industries combined is rather startling." ("Steel and the National Economy," p. 15.)

Underlying these statements is the assumption that the relationship between the level of steel profit margins and that for all manufacturing industries was proper in 1947 and that a continuation of that relationship was desirable. It further makes the incredible assumption that there exists a "price policy" for all manufacturing industries combined and that this "price policy" provides a proper guide for price policy in the steel industry. Let us examine the merits of these assumptions.

TABLE 15

Per Cent Changes in the Major Components of the Wholesale Price Index, 1939 to 1947 (1947-49 = 100)

	1939	1947	Per Cent Increase
Lumber and wood products	31.6	93.7	196.5
Farm products	36.5	100.0	174.0
Processed foods	43.3	98.2	126.8
Hides, skins and leather products	52.0	101.0	94.2
All commodities	50.1	96.4	92.4
Chemicals and allied products	55.8	101.4	81.7
All commodities other than farm products and foods	58.1	95.3	64.0
Fuel, power and lighting materials	61.8	90.9	47.1
Furniture and other household durables	65.4	95.6	46.2
Metals and metal products	62.6	91.3	45.8
Machinery and motive products	65.3	92.5	41.7
Nonmetallic minerals	69.5	93.9	35.1
Finished steel mill products	68.0	89.1	31.0
Tobacco manufactures, bottled beverages	76.4	97.2	27.2
Rubber and products	86.3	99.0	14.7

Source: U. S. Department of Labor, Bureau of Labor Statistics.

Note: On the basis of the old wholesale price index (1926 = 100) textile products rose from 69.7 in 1939 to 141.7 in 1947, or an advance of 103.3 per cent while pulp and paper increased from 82.4 in 1939 to 155.1 in 1947, or a rise of 88.2 per cent.

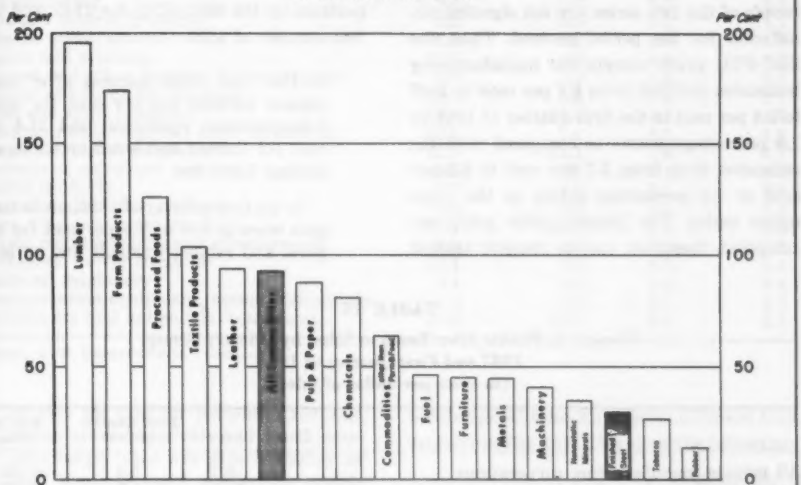
Profit margins in 1947 were affected by a variety of factors including the magnitude of the cost-price increases during World War II and in the first two postwar years. Table 15 and Chart 13 show the changes in the main components of the wholesale price index be-

Chart No. 13

PER CENT INCREASE

IN MAJOR COMPONENTS OF WHOLESALE PRICE INDEX

FROM 1939 TO 1947



Source: U. S. Department of Labor, Bureau of Labor Statistics

tween 1939 and 1947. By 1947, the index of wholesale industrial prices (non-farm, non-food) had risen by 64.0 per cent as compared with a rise of only 31.0 per cent for finished steel prices. In fact, the only industries with a price rise smaller than that for finished steel were tobacco manufactures and bottled beverages (27.2 per cent), industries with low labor content, and rubber and products (14.7 per cent). Since most companies were affected by the same types of increases in labor costs and large increases in raw material prices, these data showing larger price rises would suggest that total profits in all manufacturing industries were better sustained than for the steel industry in 1947. In the period since 1947, steel prices have risen more than other industrial prices as they overcame the war induced lag reflected in 1947 relationships.

There Is No Combined Manufacturing Price Policy

THE assumption that there is a price policy for all manufacturing industries is contrary to fact. This can be shown readily by use of the profits margin data to which the Union briefs refer. The Union used the average manufacturing margins shown in the National Income Accounts prepared by the United States Department of Commerce.

45 46

95009 O—58—pt. 4——20

However, the breakdown of those data for individual industries is available only through 1953. Detailed data are published quarterly on a more current basis by the Securities and Exchange Commission and the Federal Trade Commission for large companies in 23 manufacturing industries. The *trends* of the two series are not significantly different for the period covered. Thus, the SEC-FTC profit margin for manufacturing industries declined from 6.7 per cent in 1947 to 5.4 per cent in the first quarter of 1956 or 1.3 percentage points as compared with the estimated drop from 5.7 per cent to 4.3 per cent or 1.4 percentage points in the Commerce series. The Union's price policy assumption, therefore, can be checked against the SEC-FTC data for the period used by the Union.

Price policies vary widely among manufacturing industries, for different products sold by the same company, and at different times for the same company. Table 16 shows the profit margins reported for 23 different industries by the SEC-FTC for 1947 and the first quarter of 1956.

> In 1947, the profit margins after taxes ranged between 0.3 per cent for other transportation equipment and 11.4 per cent for lumber and wood products, excluding furniture.
>
> In the first quarter of 1956, profit margins were as low as 1.5 per cent for apparel and related products and as high

TABLE 16

Changes in Profits After Taxes to Sales, by Industry Group, 1947 and First Quarter of 1956 (in cents per dollar of sales)

	1947	First Quarter of 1956	Per Cent Change
All private manufacturing corporations	6.7	5.4	− 19.4
Lumber and wood products	11.4	4.2	− 63.2
Furniture and fixtures	6.0	3.0	− 50.0
Stone, clay, and glass products	7.9	7.5	− 5.1
PRIMARY IRON AND STEEL INDUSTRIES	6.6	7.4	+ 12.1
Primary nonferrous metal industries	8.8	9.8	+ 11.4
Fabricated metal products	7.4	4.0	− 45.9
Machinery (except electrical)	7.2	5.4	− 25.0
Electrical machinery, equipment, and supplies	6.3	3.9	− 38.1
Motor vehicles and equipment	6.0	6.0	0
Other transportation equipment	.3	3.4	+ 1033.3
Instruments and related products	7.8	5.0	− 35.9
Miscellaneous manufacturing (including ordnance)	6.2	3.2	− 48.4
Food and kindred products	4.2	2.2	− 47.6
Tobacco manufactures	4.1	4.6	+ 12.2
Textile mill products	8.2	3.2	− 61.0
Apparel and related products	4.6	1.5	− 67.4
Paper and allied products	10.7	6.2	− 42.1
Printing and publishing (except newspapers)	6.1	4.5	− 26.2
Chemicals and allied products	8.7	8.3	− 4.6
Petroleum refining	n.a.	10.4	....
Products of petroleum and coal (except petroleum refining)	n.a.	3.7	....
Rubber products	4.4	4.4	0
Leather and leather products	4.3	2.0	− 53.5

Note: In 1947, petroleum refining and products of petroleum and coal were combined.

Sources: Federal Trade Commission and Securities and Exchange Commission.

TABLE 17

Per Cent Relationship of Corporate Profits Before and After Taxes to Sales in Manufacturing Industries, 1947 and 1953

	Profits Before Taxes		Profits After Taxes	
	1947	1953	1947	1953
Manufacturing	9.3	7.7	5.7	3.2
Food and kindred products	5.2	3.9	3.1	1.7
Tobacco manufactures	6.8	9.2	4.0	3.7
Textile mill products	13.3	4.3	8.0	1.7
Apparel and other finished fabric products	5.8	1.7	3.6	0.7
Lumber and furniture products	12.1	5.5	7.5	2.7
Paper and allied products	16.3	11.2	9.9	4.7
Printing, publishing, and allied industries	10.8	7.4	6.5	3.2
Chemicals and allied products	12.7	12.1	7.6	4.7
Products of petroleum and coal	9.7	7.0	7.1	4.7
Rubber products	6.0	7.2	3.5	2.8
Leather and leather products	6.6	3.5	4.0	1.5
Stone, clay, and glass products	12.4	12.7	7.5	5.6
Metals, metal products and miscellaneous	9.9	8.5	6.0	3.6
Machinery, except electrical	11.1	9.0	6.5	3.4
Electrical machinery	9.4	9.3	5.4	3.4
Transportation equipment, except automobiles	− 0.4	6.7	− 2.5	2.3
Automobiles and automobile equipment	10.6	10.7	6.5	3.7

Source: U. S. Department of Commerce.

as 10.4 per cent for petroleum refining. Three other industries had profit margins larger than the steel industry at that time: primary nonferrous metals (9.8 per cent); chemical and allied products (8.3 per cent); and stone, clay and glass products (7.5 per cent).

Table 17 shows similar data for the United States Department of Commerce series for 1947 and 1953. Again there is shown a wide variation in profit margins as between industries for each date.

These data for industries show only part of the story because they cover very broad industry groups. For example, there is no single price policy for all types of foods. The food industry is a composite of many different types of operation with widely varying price policies and profit margins. Detailed data are not available to show the breakdown for the food industry in the SEC-FTC data. However, the First National City Bank of New York does publish profit margins as a percentage of sales for several different food industries. The 1955 data show the following:

Industrial Group	Profit Margins as Per Cent of Sales
Soft drinks	8.6
Other food products	4.0
Baking	3.4
Sugar	3.2
Dairy products	2.5
Meatpacking	0.8

Thus, in 1955 profits as a percentage of sales ranged between 0.8 per cent for meat packing and 8.6 per cent for soft drinks. Similar variations in profit margins will be found in other industries. The actual profit margin required in an industry to earn any designated return on investment or net assets is determined by the volume of sales in relationship to investment; this is known as capital turnover. This turnover varies widely among industries. Tables 18 and 19 show the estimated turnover of net assets in terms of

sales for the industries covered in the First National City Bank data in 1955. The estimates were obtained by dividing the reported margin on sales into the return on net assets. For the iron and steel industry, sales were equal to 1.9 times the net assets. At the ex-

TABLE 18

Margin on Sales, Return on Net Worth and Turnover Ratios of Major Manufacturing Groups in 1955

	% Return on Net Assets	% Margin on Sales	Turnover Ratio
Meat packing	6.7	0.8	8.4
Aircraft and parts	24.7	3.9	6.3
Dairy products	12.2	2.5	4.9
Autos and trucks	29.1	7.4	3.9
Baking	11.9	3.4	3.5
Tires, rubber products	15.1	4.5	3.4
Shoes, leather, etc.	11.5	3.5	3.3
Printing and publishing	12.9	4.3	3.0
Soap, cosmetics, etc.	16.0	5.3	3.0
Other food products	11.7	4.0	2.9
Electrical equipment, radio and television	12.8	4.4	2.9
Automobile parts	15.3	5.3	2.9
Other metal products	12.8	4.8	2.7
Miscellaneous manufacturing	11.8	4.6	2.6
Household appliances	11.6	4.6	2.5
Paint and varnish	16.4	6.7	2.4
Office equipment	16.9	7.0	2.4
Building, heating, plumbing equipment	11.5	4.9	2.3
Instruments, photo goods, etc.	17.7	7.8	2.3
Tobacco products	11.7	5.0	2.3
Clothing and apparel	7.0	3.1	2.3
Glass products	20.5	9.0	2.3
Furniture, wood products	12.6	5.8	2.2
TOTAL MANUFACTURING	15.0	6.7	2.2
Brewing	6.5	3.1	2.1
Machinery	11.6	5.7	2.0
IRON AND STEEL	15.2	7.8	1.9
Hardware and tools	10.7	5.7	1.9
Railway equipment	9.0	4.7	1.9
Nonferrous metals	16.7	9.5	1.8
Other stone, clay products	16.4	9.0	1.8
Chemical products	17.7	10.0	1.8
Distilling	6.4	3.5	1.8
Sugar	5.5	3.2	1.7
Agricultural implements	8.8	5.2	1.7
Textile products	7.1	4.1	1.7
Paper and allied products	13.8	8.3	1.7
Drugs and medicines	18.3	10.5	1.7
Soft drinks	14.1	8.6	1.6
Lumber	14.2	9.1	1.6
Petroleum products and refining	14.2	10.6	1.3
Cement	20.3	16.5	1.2

Source: First National City Bank of New York, *Monthly Letter on Business and Economic Conditions*, April 1956, p. 43.

Note: "Profit margins computed for all companies publishing sales or gross income figures which represent about 90 per cent of total number of reporting companies . . ."

TABLE 19

Margin on Sales, Return on Net Worth and Turnover Ratios of Major Nonmanufacturing Groups in 1955

	% Return on Net Assets	% Margin on Sales	Turnover Ratio
Chain stores—food	13.4	1.2	11.2
Wholesale and miscellaneous trade	8.5	1.8	4.7
Department and specialty	10.6	2.9	3.7
Construction	12.6	3.7	3.4
Chain stores—variety, etc.	10.6	3.7	2.9
Restaurant and hotel	11.5	3.9	2.9
Air transport	13.9	5.0	2.8
Mail order	12.3	4.4	2.8
Other business services	16.1	7.4	2.2
Amusements	8.6	4.4	2.0
Miscellaneous transportation	12.2	6.9	1.8
Traction and bus	4.6	3.1	1.5
Coal mining	5.6	4.2	1.3
Shipping	9.5	8.2	1.2
Other mining, quarrying	26.2	23.5	1.1
Metal mining	13.7	13.4	1.0
Telephone and telegraph	9.5	12.6	0.8
Electric power, gas, etc.	9.9	13.9	0.7
Glass I Railroads	5.7	9.2	0.6

Source: First National City Bank of New York, *Monthly Letter on Business and Economic Conditions*, April 1956, p. 43.

Note: "Profit margins computed for all companies publishing sales or gross income figures which represent about 90 per cent of total number of reporting companies . . ."

tremes, for *manufacturing industries* the meat packing industry had sales equal to 8.4 times net assets while the cement industry had a turnover of 1.2 times. For *nonmanufacturing industries*, the extremes were food chain stores with a turnover of 11.2 times and Class I Railroads with a turnover of 0.6 times.

Of the 41 manufacturing industries covered, 25 had a greater turnover and 13 industries had a smaller turnover than the steel industry; 2 other industries were the same.

Of the 13 *manufacturing industries* with a smaller annual turnover than the steel industry in 1955, 9 had a higher profit margin on sales. Of the 9 *nonmanuacturing* industry groups which had a lower annual turnover in 1955 than the steel industry, 6 reported a higher margin on sales.

In general, the lower the turnover of net assets, the higher the profit margin on sales. This is shown by Chart 14 which relates the turnover ratio and profit margin for the 41 manufacturing industries reported by the First National City Bank of New York. The fact that the steel industry profit margin is higher than the average for all manufacturing is not surprising since turnover of net assets in the steel industry is lower than for all manufacturing industries. In connection with these comparisons, it must be kept in mind industry turnover figures reflect the widely varying price policies within an industry as noted earlier.

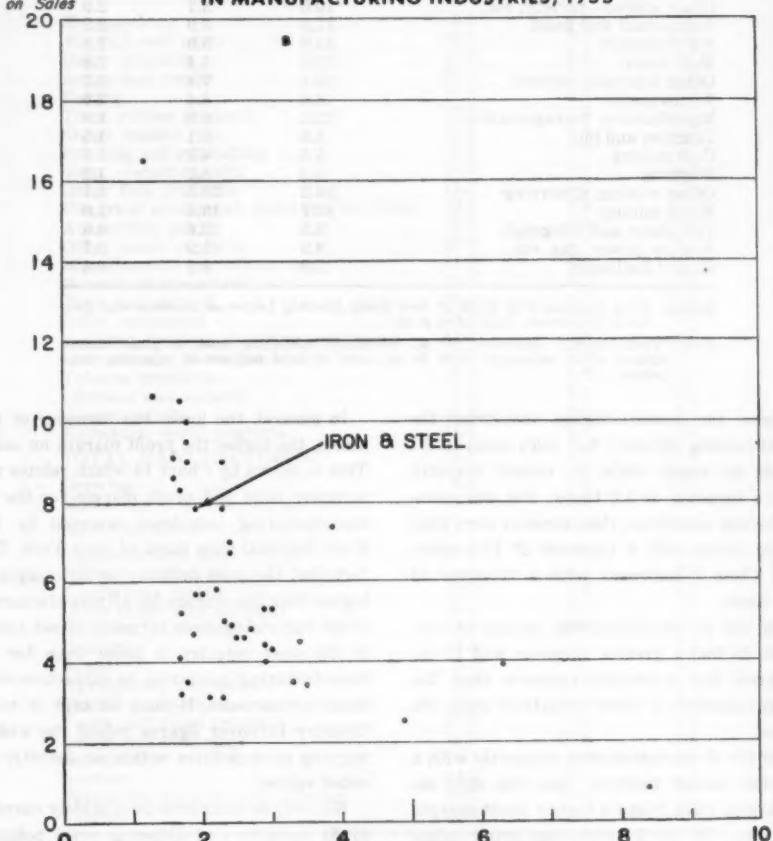
Not only do industries have widely varying profit margins and differing price policies, but the same may be true within a company depending on the products involved.

Company pricing policies also may change

over time as a product grows to maturity in terms of its market. In this connection, the difference between price policies of electrical appliance companies for television, which is

Chart No. 14

RELATION OF TURNOVER RATIO TO PER CENT MARGIN ON SALES IN MANUFACTURING INDUSTRIES, 1955



Source: First National City Bank of New York, Monthly Letter on Business and Economic Conditions, April 1956, p. 43

a product with an expanding market, and for radios, for which the market is well saturated, may be cited.

The foregoing data indicate that the alleged combined price policy for manufacturing industries is a figment of the Union's imagination. The proper profit margin for any industry can only be determined by analyzing the factors affecting its products. An adequate or a low margin for one industry may be an exceptionally high margin for another industry. For example, no one would suggest seriously that the 0.8 per cent profit margin on sales for meat packing in 1955 would be satisfactory for many other industries. Actually, the experience of different industries varies widely from the average experience. That is the nature of an average.

Other Industries Also Have Maintained or Increased Profit Margins Since 1947

ONE might almost conclude from the presentation in the Union brief that the steel industry alone failed to reduce profit margins between 1947 and the first quarter of 1956. But as Table 16 shows, profit margins were not reduced between these dates for the following industries reported in the SEC-FTC data.

	1947	First Quarter of 1956
Primary nonferrous metal industries	8.8	9.8
Other transportation equipment	0.3	3.4
Tobacco manufactures	4.1	4.6
Rubber products	4.4	4.4
Motor vehicles and equipment	6.0	6.0

Similarly, the First National City Bank's profits data included the following industries in which profit margins remained the same or rose between 1947 and 1955.

	Profit Margins As Per Cent of Sales	
Manufacturing Industries	1947	1955
Dairy Products	2.5	2.5
Tobacco Products	4.5	5.0
Tires, Rubber Products	4.4	4.5
Chemical Products	9.6	10.0
Paint and Varnish	6.0	6.7
Cement	11.5	16.5
Glass Products	8.2	9.0
Iron and Steel	6.2	7.8
Autos and Trucks	6.4	7.4
Aircraft and Parts	—4.0	3.9
Nonmanufacturing Industries		
Metal Mining	12.7	13.4
Class I Railroads	5.5	9.2
Air Transport	—3.0	5.0
Telephone and Telegraph	7.2	12.6
All Industries	6.8	6.8

Source: First National City Bank of New York *Monthly Letter on Business and Economic Condition*, April 1949 and April 1956.

Thus for 9 other manufacturing industries and 4 nonmanufacturing industries in this sample, the profit margin rose (12 industries) or remained unchanged (1 industry) between 1947 and 1955. Clearly, an increase in profit margins between 1947 and 1955 was not unique to the steel industry.

Some Industries Have Higher Profit Margins Than Steel

TABLE 18 shows that 10 out of 40 other manufacturing industries in the First National City Bank sample reported a higher return on sales in 1955 than the iron and steel industry; one other industry reported the same return. (See Chart 15.)

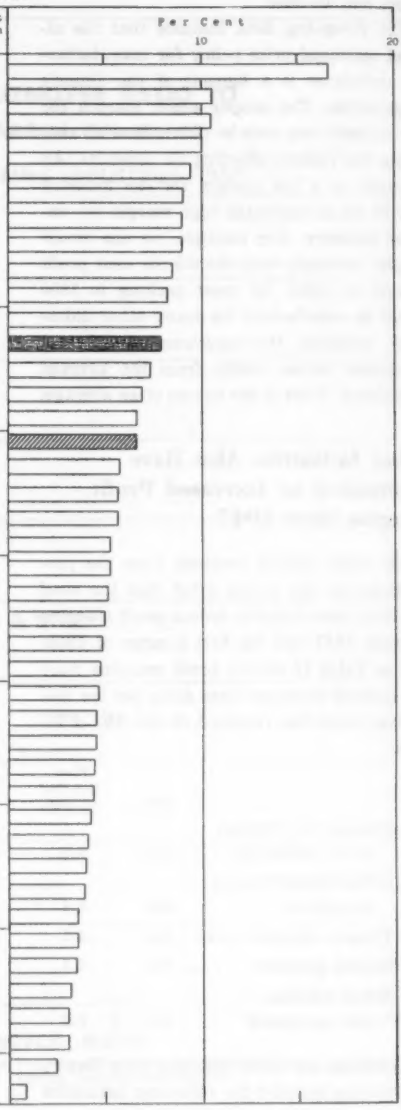
Steel Prices, Profits, Productivity, and Wages

Chart No. 15

PROFIT MARGIN AS PER CENT OF SALES - MAJOR MANUFACTURING INDUSTRIES

1955

Industrial Group	Per Cent return on Sales
1. Cement	16.5
2. Petroleum products and refining	10.6
3. Drugs and medicines	10.5
4. Chemical products	10.0
5. Nonferrous metals	9.5
6. Lumber	9.1
7. Glass products	9.0
8. Other stone, clay products	9.0
9. Soft drinks	8.6
10. Paper and allied products	8.3
11. Instruments, photo goods, etc.	7.8
12. IRON AND STEEL	7.8
13. Autos and trucks	7.4
14. Office equipment	7.0
15. Paint and varnish	6.7
16. TOTAL MANUFACTURING	6.7
17. Furniture, wood products	5.8
18. Hardware and tools	5.7
19. Machinery	5.7
20. Automobile parts	5.3
21. Soap, cosmetics, etc.	5.3
22. Agricultural implements	5.2
23. Tobacco products	5.0
24. Building, heating, plumbing equipment	4.9
25. Other metal products	4.8
26. Railway equipment	4.7
27. Household appliances	4.6
28. Miscellaneous manufacturing	4.6
29. Tires, rubber products	4.5
30. Electrical equipment, radio and television	4.4
31. Printing and publishing	4.3
32. Textile products	4.1
33. Other food products	4.0
34. Aircraft and parts	3.9
35. Distilling	3.5
36. Shoes, leather, etc.	3.5
37. Baking	3.4
38. Sugar	3.2
39. Brewing	3.1
40. Clothing and apparel	3.1
41. Dairy products	2.5
42. Meat packing	0.8



Source: First National City Bank of New York, Monthly Letter on Business and Economic Conditions, April 1956, p. 43.

Manufacturing Industry	Profit Margin as Per Cent of Sales
Cement	16.5
Petroleum Products and Refining	10.6
Drugs and Medicines	10.5
Chemical Products	10.0
Nonferrous Metals	9.5
Lumber	9.1
Glass Products	9.0
Other Stone, Clay Products	9.0
Soft Drinks	8.6
Paper and Allied Products	8.3
Instruments, Photo Goods	7.8
Iron and Steel	7.8

According to Table 18, each of the industries (except glass products) with a higher profit margin on sales than steel had a lower turnover ratio. In addition, Table 19 lists 6 nonmanufacturing industries with a higher profit margin than the iron and steel industry in 1955. Thus, higher profit margins were reported in 16 out of 60 other industries or almost 3 out of every 10 industries for which the First National City Bank reported data.

Other Factors Affecting Trend of Profit Margins

MOREOVER, profit margins declined for some industries from 1947 to the first quarter of 1956 because of changes in their economic well being rather than because of any price policy designed to lower profit margins. Thus, the textile industry which benefited from the early postwar boom had a profit margin of 8.2 per cent in 1947. However, as a result of economic adversity, the margin had declined to 3.2 per cent early in 1956. Similarly, in the same period the apparel profit margin fell from 4.6 per cent to 1.5 per cent and the profit margin for lumber and wood products fell from 11.4 per cent to 4.2 per cent.

The decline in the profit margin for all manufacturing reflected a number of cross currents which influenced the economic positions of the individual industries in the two selected periods rather than any price policy designed to narrow profit margins. In some instances, these economic forces resulted in high profit margins in 1947 while in other instances they acted to depress profit margins early in 1956. It was the combined influence of these forces which resulted in a lower profit margin rather than a "combined price policy" aimed at lowering margins. In light of these factors there is no reason why the trend of the profit margin in the steel industry should have paralleled that for all manufacturing industries as the Union suggests.

VIII. STEEL PROFITS IN ECONOMIC PERSPECTIVE

THE Union devotes considerable attention to its allegation that steel profits are excessively high. It is able to reach this conclusion by a careful selection of base dates and by making comparisons which have little meaning because of the inadequacies of the data used. In its presentation, the Union passed over rather quickly the phantom profits which have developed in the steel industry as well as in other industries as a result of inadequacy of depreciation allowances to cover the cost of replacing plant and equipment at today's highly inflated prices. The Union then proceeds to paint a picture of excessive returns on net worth by relating the profits inclusive of phantom profits to a net worth which fails to reflect the effects of inflation.

That steel profits in recent years have not been out of line with the expanding role of steel in our national economy is indicated when these profits are related to the expanding economy in which they are earned. The increases in the profit margin as a per cent of sales from the depressed levels used by the Union as base periods was found in an earlier section to be a normal development and to reflect similar experience in past periods of boom. When steel profits are set against the economic environment in which they are earned, a significantly different picture emerges from that presented by the Union.

In this section, we shall consider the impact of inadequate depreciation allowance upon reported profits, the inadequacies of net worth comparisons, and the factors which have contributed to reported increases in profits.

Inadequacy of Depreciation Allowances Creates Phantom Profits

IN both "Facts On Steel," and "Steel and the National Economy," the Union closes its mind completely to the influence of inflation upon the adequacy of legal depreciation allowances. This is a particularly important problem in an industry with so heavy an investment in plant and equipment as is characteristic of basic steel. The Union does not explore the extent to which book profits have been *overstated* because of inability of the industry to charge off true capital consumption as an operating expense. Instead, the Union attempts to dismiss the problem cavalierly as an attempt "to sell the proposition that the Administration's refusal to revise the tax laws pertaining to depreciation along the lines desired by the steel companies requires the industry to raise its prices again in order to have sufficient funds to maintain and replace its properties." ("Facts On Steel," p. 38.)

Again, without any supporting evidence, it is contended that "from 1952 through most of 1955, prices in general, except for steel prices, were relatively stable—i.e., the cost of maintaining steel facilities, replacing outworn and obsolete equipment, etc. was not appreciably different in 1953, 1954, and 1955." (*Idem.*, p. 39.) This quick dismissal of recent price changes completely ignores the increase in prices of producers finished goods and in construction costs from 1952 to 1956.

With no attempt whatsoever to offer supporting evidence, it is stated in doctrinaire form that "Total depreciation charges now are probably too high, even on the basis of replacement cost in relation to the life of depreciable assets. In any case, the old argument on this point is not presented any more except as a last resort type of exhortation." ("Steel and the National Economy," pp. 17 and 18.) In fact, in its summary, the Union flatly states its position. "High and accelerated depreciation charges permitted generally

under the new 1954 tax law and specifically for plants related to national security, *have resulted in a probable understatement of reported profits relative to actual profits.*" (*Idem.*, p. 2.) There is no support for this conclusion.

Measuring Capital Consumption

HISTORICALLY, depreciation has been determined by charging off the *original* cost of plant or equipment over its anticipated useful life. This so-called straight-line method was designed to measure the wearing out of fixed capital from physical use and obsolescence combined. The measure of capital consumption was then deducted as a cost of doing business in arriving at corporate profits. In recent years depreciation (on an original cost basis) in manufacturing industries has been running at about $5 billion annually and for all corporations at more than three times that amount. Obviously, the adequacy of depreciation charges has an important bearing on the accuracy or realistic character of profits not only in the steel industry but in all industries with a high fixed investment per dollar of sales or gross receipts.

The purpose behind such deductions is to keep the real capital of the enterprise intact. In a period of stable prices, the cumulative charge-offs for a given item of plant or equipment will be sufficient to permit its replacement at the end of its stipulated productive span. In a period of rising prices, however, depreciation based upon original cost would become increasingly inadequate in maintaining *real* capital intact.

Reported profits are determined on the basis of conventional accounting procedures, which are well suited for years of relative price stability.[1] During a period of inflation, the net effect of these procedures is an *overstatement* of reported profits. Professor W. A. Paton, a leading authority on accounting, described the problem to the 1949 Steel Wage Board as follows:

> "The underlying reason for the overstatement of corporate earnings in the postwar years is found in the fact that ordinary accounting procedure is based on the assumption that the measuring unit used, the dollar, is a stable quantum, not subject to fluctuation. Actually, as we all know, the value of the dollar—its economic significance — varies continuously. As long as the variation moves within narrow limits, over a period of years, the tendency of accounting to overstate periodic earnings (when prices are rising) or to understate periodic earnings (when prices are falling) is not of serious consequence. When, however, the movement in the price level is severe and persistent the limitations of the accounting data become more pronounced and the problem of the interpretation of financial statements is a serious matter. We are in such a period now, and accounting showings of current earnings based on recorded dollar costs are materially overstated.
>
> ". . . . the primary adjustment needed in present-day income statements of industrial concerns is a revision upward of depreciation charges in the case of plant acquired at a substantially lower price level than that now prevailing. *Without such adjustment corporate earnings as reported are generally overstated, in some cases very substantially.*" (*Italics* added.)

Professor R. C. Jones of Yale University has pointed out:

> "The fact is that current charges for depreciation are too low, not because of any real or imaginary connection with current replacements, but rather because the postinflation dollars in which costs are recovered have substantially less value than did the preinflation dollars in which the costs were incurred. *The fail-*

[1] Adapted from testimony of Jules Backman before the 1952 Steel Wage Board.

> *ure to recognize this purchasing power deficiency results in an overstatement of taxable income, excessive income taxes, and an exaggerated rate of return on book investment.*"[1] (*Italics* added.)

Similarly, the United States Department of Commerce has recognized this development as the following statement shows:

> "Business profits, which make up the largest part of property income, are determined by the deduction from gross receipts of the costs of doing business, among them being depreciation. Property income is thus dependent in part on the manner in which depreciation is computed. In estimating national income, the depreciation deducted is that reported for tax purposes by business, and is based on the original cost of the assets being depreciated. *If current-year values of depreciation are substituted for the reported values, a measure of business profits and of total property income results that is more meaningful in many ways because all costs as well as gross receipts are expressed at a uniform current valuation.*"[2] (*Italics* added.)

The manner in which this situation develops may be illustrated as follows. Straight line depreciation ordinarily is calculated by taking the original cost of plant or equipment, deducting its anticipated salvage value, and dividing the remaining amount by the number of years the plant or equipment is expected to be used. If a plant costs $1,000,000, has a salvage value of $100,000, and has a life of 20 years, the average annual charge for depreciation would be $45,000. While there are exceptions to the use of this method of straight line depreciation, basically it does illustrate the manner in which depreciation reserves are established. Suppose at the time the plant is replaced, the cost of its replacement by a plant which can produce the same volume of goods has risen to $2 million, instead of the original cost of $1 million. Under these conditions, it is clear that the company will not have made adequate provision to maintain its real capital—its plant and equipment—intact. Thus, for example, assume that the plant has two machines, each of which originally cost $1 million. Presumably a total of $2 million normally would be accumulated over the years as depreciation (plus salvage) for these two machines. If at the time they were used up, the cost of the machines had doubled, the company would be able to buy only one machine with these funds and thus, in effect, would have had its real capital reduced by one machine.

It must be recognized, of course, that companies usually do not buy identical machines when such replacement occurs. The new machines undoubtedly incorporate technological changes developed after the original machines were acquired. Nevertheless, the company is still faced with the problem of providing through depreciation reserves, funds for the purchase of machines having at least equivalent capacity to those which are used up.

Not too many attempts have been made to measure the deficiency in depreciation for specific companies. However, Professor R. C. Jones has made such a detailed study for four companies. His study concluded:

> "The average deficiency in the purchasing power of the depreciation charges of each of the four companies studied in this project is shown below for the five postwar years, 1947-51.

	Per Cent
Armstrong Cork Company	30
New York Telephone Company	27
The Reece Corporation	28
Sargent & Company	29

[1] Ralph Coughenour Jones, *Effects of Price Level Changes on Business Income, Capital, and Taxes*, American Accounting Association, 1956, pp. 80 and 81.

[2] U. S. Department of Commerce, *Survey of Current Business*, November 1956, p. 19.

TABLE 20

Depreciation on Privately Owned Structures and Equipment in Manufacturing Establishments, 1929-55

(Billions of dollars)

Year	Original Cost			Current-year cost[1]			Ratio of Current-year Cost to Original Cost[2]		
	Structures and Equipment	Structures	Equipment	Structures and Equipment	Structures	Equipment	Structures and Equipment	Structures	Equipment
1929	1.4	0.5	1.0	1.7	0.6	1.0	1.17	1.37	1.08
1930	1.5	.5	1.0	1.6	.6	1.0	1.08	1.20	1.02
1931	1.5	.5	1.0	1.5	.5	1.0	.99	1.03	.97
1932	1.5	.5	1.0	1.4	.5	.9	.92	.93	.92
1933	1.4	.5	.9	1.3	.5	.8	.92	.94	.91
1934	1.4	.5	.9	1.4	.5	.9	1.02	1.09	.97
1935	1.4	.5	.9	1.4	.6	.9	1.02	1.10	.98
1936	1.4	.5	.9	1.5	.6	.9	1.04	1.15	.98
1937	1.4	.5	.9	1.6	.7	1.0	1.13	1.27	1.05
1938	1.5	.5	.9	1.6	.7	1.0	1.11	1.23	1.05
1939	1.5	.5	.9	1.6	.6	1.0	1.09	1.18	1.04
1940	1.5	.5	1.0	1.7	.7	1.0	1.13	1.24	1.07
1941	1.6	.6	1.0	1.9	.8	1.2	1.22	1.36	1.14
1942	1.7	.6	1.1	2.1	.9	1.2	1.27	1.52	1.13
1943	1.7	.6	1.1	2.2	1.0	1.2	1.29	1.63	1.11
1944	1.8	.6	1.2	2.2	.9	1.3	1.26	1.55	1.11
1945	1.9	.6	1.3	2.4	1.0	1.4	1.27	1.62	1.10
1946	2.0	.6	1.4	2.8	1.2	1.6	1.38	1.87	1.15
1947	2.3	.7	1.6	3.6	1.5	2.1	1.54	2.06	1.30
1948	2.7	.8	1.9	4.2	1.7	2.5	1.58	2.18	1.33
1949	2.9	.8	2.1	4.5	1.7	2.8	1.52	2.05	1.32
1950	3.2	.9	2.3	4.8	1.7	3.0	1.49	1.99	1.31
1951	3.5	.9	2.6	5.5	1.9	3.6	1.58	2.14	1.38
1952	3.9	1.0	2.9	5.8	2.0	3.8	1.50	2.08	1.31
1953	4.2	1.0	3.2	6.1	2.0	4.0	1.44	2.01	1.27
1954	4.5	1.1	3.5	6.4	2.0	4.4	1.41	1.87	1.27
1955	4.9	1.1	3.7	6.7	2.1	4.6	1.38	1.84	1.25

1. Cost prevailing in each year of period. 2. Computed from unrounded figures.

Source: U. S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, November, 1956, p. 11.

"These deficiencies, it should be noted, are in terms of general purchasing power and not in terms of replacement costs. No attempt has been made to compute current or replacement costs because the effect of technological change cannot be determined, but the rapid rise in index numbers for construction costs and machinery prices suggests that the deficiencies on a replacement cost basis would be higher than they are in terms of general purchasing power."[1]

During virtually all of the postwar period, the United States Department of Commerce has stressed the conceptual desirability of adjusting corporate profits in the national income accounts for the inadequacy of depreciation allowances, as it does currently to remove the effect of changes in inventory

[1] Jones, *op. cit.*, p. 85.

values. Until recently, however, it had not developed an acceptable procedure for correction of the under-depreciation.

We now have official formalized measures for depreciation in manufacturing industries on a current-year value basis. These estimates reveal the extent of the divergence between depreciation as reported for tax purposes and actual depreciation required to keep the real stock of corporate assets intact.[1] These figures show that in the years selected by the Union as being devoid of under-depreciation because of "price stability," current-year cost depreciation exceeded original cost by almost $2 billion annually just for manufacturing establishments alone. (See Table 20.)

Year	Original Cost	Current-Year Cost	Ratio of Current-Year Cost to Original Cost
	(billions of dollars)		
1952	3.9	5.8	1.50
1953	4.2	6.1	1.44
1954	4.5	6.4	1.41
1955	4.9	6.7	1.38

Source: United States Department of Commerce.

In presenting these estimates, the United States Department of Commerce notes:

> "The using up of fixed capital, which is a result of wear and tear in the process of production and of obsolescence, is conventionally measured by depreciation. The usual business practice is to allocate the original cost of depreciable assets over the estimated useful life (generally by the straight-line method in the period covered by this study). Depreciation accumulated in the previous periods is subtracted from the original cost of the stock of depreciable assets to arrive at its net value.
>
> *"When the prices of capital goods change, computation of depreciation on the original cost of fixed assets yields estimates of capital consumption and net asset values which are inappropriate* for our purposes. An original-cost-estimate for any given year will reflect, not the price level for any one year, but a mixture of the prices of preceding years. This makes it difficult to combine or compare it with estimates of other economic magnitudes for the same year or with estimates of the same item for different years."[2] (*Italics* added.)

What the Department of Commerce has done is to estimate depreciation at constant cost (1947 prices) as well as original costs "by applying information on useful lives to the respective current and constant dollar purchases of structures and equipment." After computing depreciation by the straight-line method, depreciation at constant cost was converted to *current-year cost* by multiplying the depreciation for each year by the construction and equipment price indexes for that year. The Department warns that in the use of price indexes, adequate allowance may not be made for quality changes or for the greater efficiency of capital goods because of improved plant layout, better organization, etc.

There are also offsets in the other direction, however. Thus, the Department adds that "in an expanding industry such as manufacturing, the straight-line method again overstates the level of net assets *and in addition understates depreciation.*" (*Italics* added.) Again another offset, particularly in the light of the bulge in investment in recent years, is the point advanced by the Department to the effect that "the straight-line method of allocating depreciation over the useful life of the capital goods tends to *understate* the use derived from the structures and equipment in the early years of life and to overstate the use obtained in later years."[3] (*Italics* added.) Finally, revolutionary technological developments can also shorten the

[1] "Manufacturing Investment Since 1929 in Relation to Employment, Output, and Income," *Survey of Current Business*, November 1956, pp. 8-20.

[2] *Ibid.*, p. 11.

[3] *Ibid.*, p. 12.

lives of existing assets through extraordinary obsolescence.

How do the Union's contentions measure up with the findings of the United States Department of Commerce, keeping in mind the reservations as to both over-statement and under-statement even in the Department's estimates? Viewed over the longer-term, the Department's figures show the significant extent to which under-depreciation has affected manufacturing profits. Selecting the period so frequently cited by the Union, 1947-1955, manufacturing depreciation on an original cost basis is found to aggregate about $32 billion. The corresponding total on a current-year cost basis is about $47.5 billion. The difference of about $15 billion or 50 per cent is large and meaningful despite the reservations earlier cited as to inability to correct for quality change. Indeed, in the period of price stability cited by the Union, namely, 1952-1955, the traditional form of depreciation allowance fell about $7.5 billion short of replacement costs.

Even without further pressure from new price increases, replacement costs were still running well over 40 per cent above depreciation measured on the basis of original costs. What the Union has obviously failed to comprehend is that, despite short-term price stability, the inadequacies of depreciation on an original cost basis still remain. The need for correcting for inventory profits may well be eliminated by stable prices over the short-term. But much of our existing plant and equipment was purchased before the war or immediately after. The index of wholesale prices of producers' finished goods advanced by 55.2 per cent between 1947 and December 1956. Even with stable prices, therefore, durable equipment purchased less than a decade ago would cost $3 to replace for every $2 of original cost. Depreciation determined on an original cost basis would be just about as inadequate as it was previously shown to be by the Department's actual estimates for all manufacturing.

The Union's charge, given wide publicity, in its summary statement and elsewhere is that depreciation has been overstated and that, hence, this has "resulted in a *probable understatement* of reported profits relative to actual profits." The official figures completely cut the ground from under this charge. It is true that as industry has added more modern and higher-priced equipment, the impact of under-depreciation upon profits has been reduced. The zenith of replacement cost relative to original cost was apparently reached in 1948-1951.

In more recent years, the differences between depreciation on original and replacement cost bases have tended to narrow but even in 1955 current cost depreciation was still running 36.7 per cent above the corresponding original cost depreciation. (See Chart 16.) Since manufacturing income before taxes in 1955 was about $24 billion, it can be seen that the understatement of depreciation even in that year led to a significant *overstatement* of actual profits, rather than the understatement claimed by the Union.

For the long-term, the Department of Commerce has these conclusions to offer:

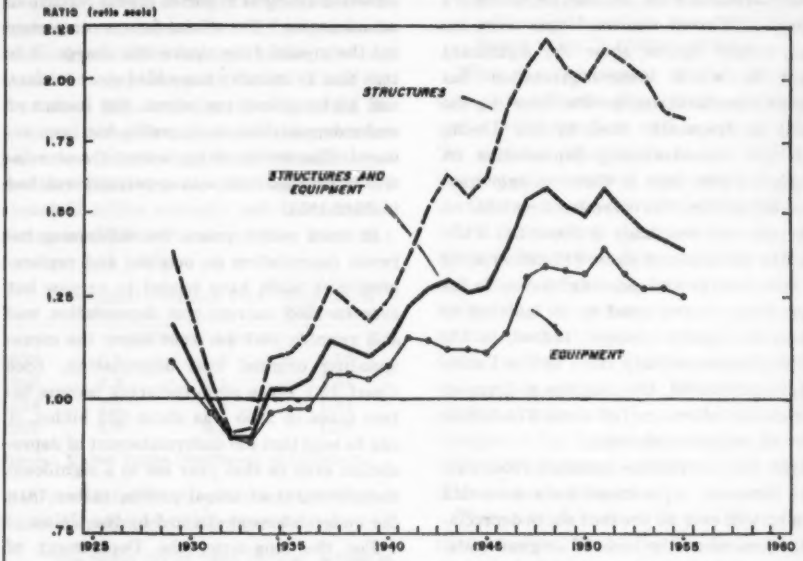
> "To convert reported manufacturing depreciation into current values it must be adjusted upwards in all years in the period, 1929-1955 save 3 during the trough of depression; and even in those years, the downward adjustment is less than 10 per cent. The size of the adjustment increases persistently from 1933 to 1948—to a maximum of about 60 per cent—because of the almost continuous increase in prices that occurred during these years. With prices considerably more stable thereafter, the prices underlying book value depreciation gradually catch up with current year prices and the ratio of current to original cost tends to decline."[1]

[1] *Idem.*, p. 19.

Chart No. 16

MANUFACTURING DEPRECIATION

RATIO OF CURRENT YEAR COST TO ORIGINAL COST



U. S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, November 1956, p. 19.

Accelerated Amortization Does Not Provide Full Offset to Under-Depreciation

THE Union attempts to make particular capital of the offsets to under-depreciation arising from accelerated amortization "during World War II and during and after Korea." ("Steel and the National Economy," p. 17.) "Further, the tax laws of the United States have been revised to allow all plant and equipment outlays to be depreciated at a more rapid than *normal* rate." Without offering any evidence as to how widespread has been the adoption of the "more rapid" rate or of the actual amounts involved, the conclusion is then offered that "normal depreciation charges would have been far less. The larger depreciation allowances might be looked upon as extra profits."

The facts concerning the impact of rapid amortization contradict the Union's unsupported contention that "Total depreciation charges now are probably too high, even on the basis of replacement cost, in relation to the life of depreciable assets." ("Steel and the National Economy," p. 17.)

Instead, the United States Department of

Commerce finds that even after allowance for rapid amortization, economic depreciation continued to outstrip legally permissible depreciation in recent years.

> "Beginning in 1941, the upward adjustment in property income because of rapid amortization tends to offset the depreciation revaluation and because of its increasing importance through 1945, the net effect is up in 1944 and 1945. From 1946 to 1951, the amortization adjustment changes direction and works to decrease property income thus reinforcing the effect of the depreciation revaluation, although the latter is quantitatively much the more important. *Again in 1952* as in 1941, the *advent of rapid amortization mitigates the downward depreciation valuation adjustment, but through 1955 the net adjustment has continued to diminish the relative share of manufacturing property income.*"[1] (*Italics* added.)

Data are not available to show for the entire steel industry the extent to which accelerated amortization has offset the underdepreciation of other property.

Estimates made by United States Steel Corporation show that the total depreciation charges, inclusive of accelerated amortization, have fallen short of the amounts required to replace the assets used up in each of the postwar years. In its Annual Report for 1956, the Corporation reported:

> "Thus U. S. Steel's wear and exhaustion recorded for 1956 was $278 million, or about $67 million short of the $345 million needed for buying power recovery. Included in recorded wear and exhaustion is $140 million of amortization which will decline and virtually disappear after 1958.
>
> "As that happens the depreciation deficiency will actually increase and income will seemingly increase. Since taxes will increase by over half the decline in amortization, a curious and serious situation will result: At the very time that the business appears to have greater income the cash with which to conduct it is diminished; and cash is what is required to cover the ever-mounting costs, to supplement the inadequate depreciation permitted, and to meet the expanding working capital requirements in a period of continuing cost inflation."[2]

Chart 17 shows the picture since 1940 for United States Steel. The aggregate deficiency for the 1940-56 period has been $904.0 million. As a result of this deficiency, profits have been *overstated*, not understated as alleged by the Union.

It seems apparent that accelerated amortization has offset only part of the underdepreciation of assets. But even this partial relief will exact its price tomorrow. When this acceleration disappears over the next few years, the result will be an increase in the magnitude of underdepreciation and a rise in the magnitude of phantom profits.

Higher Replacement Costs

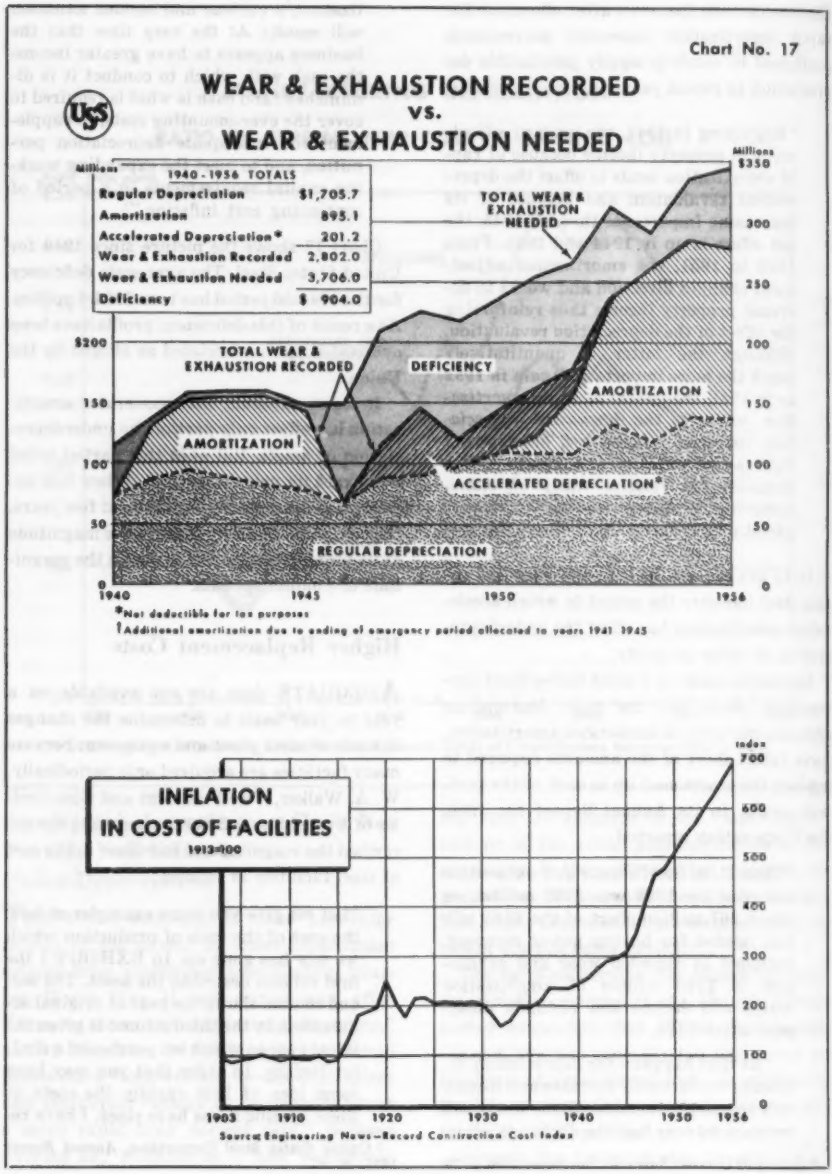
ADEQUATE data are not available on a year to year basis to determine the changes in costs of steel plant and equipment because many facilities are acquired only periodically. W. A. Walker, Vice President and Comptroller of United States Steel Corporation, has described the magnitude of increases in the cost of steel facilities as follows:

> "Let me give you some examples of how the cost of the tools of production which we buy has gone up. In EXHIBIT I the first column describes the asset. The second column shows the year of original acquisition. In the third column is given the latest year in which we purchased a similar facility. In order that you may have some idea of how rapidly the costs of these specific items have risen, I have re-

[1] *Survey of Current Business*, November 1956, p. 20.

[2] United States Steel Corporation, *Annual Report 1956*, p. 27.

Chart No. 17


WEAR & EXHAUSTION RECORDED
vs.
WEAR & EXHAUSTION NEEDED
Millions
1940 - 1956 TOTALS
Regular Depreciation $1,705.7
Amortization 895.1
Accelerated Depreciation* 201.2
Wear & Exhaustion Recorded 2,802.0
Wear & Exhaustion Needed 3,706.0
Deficiency $ 904.0
TOTAL WEAR & EXHAUSTION NEEDED
TOTAL WEAR & EXHAUSTION RECORDED
DEFICIENCY
AMORTIZATION
AMORTIZATION†
ACCELERATED DEPRECIATION*
REGULAR DEPRECIATION
$350
300
250
200
150
100
50
0
1940
1945
1950
1956
*Not deductible for tax purposes
†Additional amortization due to ending of emergency period allocated to years 1941 1945
INFLATION
IN COST OF FACILITIES
1913=100
Index
700
600
500
400
300
200
100
0
1903
1910
1920
1930
1940
1950
1956
Source: Engineering News—Record Construction Cost Index

corded percentages in the last column. *These are the compound rates of increase in cost per year.* If you run your eye down that last column, you will see that for these individual items the compound percentage rate of increase per year ranges from 4.4 per cent to 19.6 per cent per year."

EXHIBIT I

Specific Fixed Asset Cost Increases

Asset	Original Year	Latest Year	% Per Year Increase
100 ton ladle	1912	1956	5.0
Structural mill & aux.	1926	1956	4.4
6 stand billet mill	1925	1951	5.5
Blast furnace	1948	1952	19.6
O.H. charging machine	1929	1951	6.9
Electrolytic clean. line	1946	1951	16.5
Boring mill	1945	1956	7.7
Coke battery	1927	1952	5.6
Cold reduction mill	1940	1950	8.9
1750 hp reversing motor	1945	1955	7.8

W. A. Walker, *Inadequate Depreciation in the Metals Manufacturing Industry*, October 1956, pp. 2 and 3.

Roger Blough, Chairman of the Board of United States Steel Corporation, has illustrated the problem of higher replacement costs as follows:

> "During the past 10 years alone, our plant and equipment costs have more than doubled. . . . Let me give you an actual example of this problem as we face it today:
>
> "Back in 1930 we built an open hearth plant which cost about $10 million. Today it will cost us about $64 million to replace that plant. Through depreciation we have recovered the original $10 million that we spent on this facility. The remaining $54 million, however, will have to come out of our profits—our profits after taxes.
>
> "But in order to earn $54 million in profits after taxes, we have to earn $112½ million before taxes. And last year it took the profit on 600 million of the dollars we received from our customers—about one-seventh of our total sales—to pay for that one open hearth plant.
>
> "So every penny of profit we made on one-seventh of our total sales last year will be wiped out in replacing this open hearth. And that, of course, is only one facility. We have many other furnaces, mills, and machines which must be replaced each year.
>
> "In this connection, however, I should point out that many new facilities we buy today are better and more productive than the old ones they replace; and the new open hearth shop I have just described will produce about one-third more steel than the present one does. But taking this into full account, it will still cost more than 4½ times as much, per ton of capacity, as the original facility did."[1]

Russell L. Peters, chairman of the finance committee of Inland Steel Company has pointed out:

> "It now costs us about 3½ times the original price to replace a given facility installed 25 years ago. If this inflationary trend continues as it has during the past 15 years, it will in the next 10 years cost us 5.43 times the original price to replace a facility that was constructed 25 years earlier.
>
> "New financing is not the answer to the replacement of facilities needed just to maintain present capacity levels. You cannot borrow money which must be paid back out of earnings, or sell stock, just to stand still. This would represent a dilution of equity in its worst form.
>
> "This leaves only one source of funds for the amounts needed to supplement inadequate depreciation allowances and

[1] Formal remarks at the annual meeting of stockholders, May 7, 1956.

for the purpose of keeping present capacities intact—higher prices."

Benjamin Fairless, President of the American Iron and Steel Institute, estimated in 1956 that "at 1955 prices the industry must spend somewhere between a billion and 1.2 billion dollars a year for facilities in order to stay even. This does not include anything for major capacity expansion. Ten years ago the corresponding estimate was from $400 to $500 million. Call it $450 million. . . . Part of the reason for the big increase that has occurred in the stay-even cost over the past ten years is that capacity was expanded."

The Union's claim that "the cost of maintaining steel facilities, replacing outworn and obsolete equipment, etc. was not appreciably different in 1953, 1954, and 1955," ("Facts On Steel," p. 39) is not supported by the available data. Table 21 shows the changes in the prices of producers finished goods and construction costs. Between 1952 and 1955—the period of so-called stability in costs—the Engineering News Record's index of construction costs rose from 126.4 to 146.2 or by 15.7 per cent. By the end of 1956, the index was 156.3, thus making the total rise 23.7 per cent since 1952. (See Chart 17.) The Bureau of Labor Statistics index of producers finished goods rose by 5.9 per cent between 1952 and 1955; by the end of 1956, the level was 18.7 per cent above the 1952 level.

TABLE 21

Changes in Prices of Producers' Finished Goods, Non-Farm-Non-Food Commodities and Construction Costs, 1939-1956

(1947-49 = 100)

Year	Wholesale Prices		Construction Costs	
	Producers Finished Goods	Non-Farm-Non-Food Commodities	Engineering News Record	Department of Commerce
1939	n.a.	58.1	52.1	51.0
1940	n.a.	59.4	53.6	51.8
1941	n.a.	63.7	57.2	55.0
1942	n.a.	68.3	61.3	61.4
1943	n.a.	69.3	64.2	64.7
1944	n.a.	70.4	66.1	64.4
1945	n.a.	71.3	68.2	66.7
1946	n.a.	78.3	77.7	76.5
1947	92.8	95.3	92.2	93.3
1948	101.1	103.4	102.4	104.0
1949	106.1	101.3	105.4	103.0
1950	108.7	105.0	113.4	106.5
1951	119.3	115.9	120.1	115.4
1952	121.3	113.2	126.4	119.1
1953	123.1	114.0	132.9	121.8
1954	124.7	114.5	139.2	121.6
1955	128.5	117.0	146.2	124.6
1956	138.1	122.2	153.4	130.7
Dec. 1956	144.0	124.7	156.3	132.8

n.a. Not available.

Sources: *Economic Report of the President*, January 1957, p. 163; United States Department of Commerce, *Business Statistics*, 1955 Biennial Edition, pp. 27, 38, 39; *Survey of Current Business*, July 1956, p. S-8; February 1957, p. S-8.

The most recent observations of the Council of Economic Advisers on price trends are also directly pertinent.

> "Prices of most commodities and services rose during 1956. Industrial prices, which had begun to increase in the second half of 1955, continued their upward movement in 1956. . . . The increase in machinery and equipment prices was accelerated. . . . *By December, prices of producer equipment had risen 13 per cent above those at mid-1955*, intermediate materials for durable goods manufacturing 10 per cent, construction materials prices 7 per cent, consumer durables 6 per cent, consumer nondurables 3 per cent, and the average of all industrial prices 8 per cent." (*Italics* added.)[1]

These are significant increases in costs for a relatively short period of time and suggest that the costs of new steel plant and equipment have been far from stable since 1952. The forces creating underdepreciation and phantom profits have continued to operate.

In summary, it seems clear that inadequate depreciation continues to lead to an overstatement of profits of American industry, particularly for steel and other manufacturing industries with a relatively high fixed investment in capital facilities and equipment.

Short term price stability may resolve the problem of inventory revaluation but the need for depreciation revaluation would continue even if prices of capital goods were to remain stable for even a decade. Actually, prices of producer finished goods rose by 13 per cent from June 1955 to December 1956; construction costs have also continued to move upward unbrokenly. Thus, the problem of underdepreciation and the resulting overstatement of book profits continues critical rather than an "old argument . . . not presented any more except as a last resort type of exhortation," as the Union contends.

[1] *Economic Report of the President*, 1957, pp. 30, 32.

Inadequacies of Net Worth-Profit Comparisons

THE Union brief is replete with references to steel profits relative to net worth. The reader is never informed about the limitations and reservations which surround the conclusions drawn from such comparisons. It is stated that "*net profits (after taxes)* as a rate of return on net worth for 1955 were 13.8 per cent, which is considerably higher than the rate for any year in the last quarter of a century (except for 1950) and more than *double* the 6 per cent rate which normally and traditionally has been considered to be a fair and reasonable rate of return on stockholder investment." ("Facts On Steel," p. 12.) (*Italics* added)

It is also stated that

> "while the steel industry constantly complains of an inadequate return on its investment, the actual figures do not bear this out. It has long been accepted in accounting and financial circles that net profits after taxes at 6 per cent on net worth represent a fair and reasonable rate of return. In 1939 the steel industry did not quite reach this standard. The rate of return that year was 4.2 per cent. Since then the rate of return has exceeded 6 per cent in every year except during World War II. In most peace-time years since 1939, the rate has been in excess of 10 per cent. In 1955, the over-all rate for the Industry (25 companies) was a phenomenal 13.8 per cent with only 2 companies earning a rate of less than 6 per cent and 17 companies earning more than 10 per cent." (*Ibid.*, pp. 18 and 19.)

For manufacturing industries, it is pointed out that:

> "In only one year since 1947, namely, the 1954 recession year, did the rate of profits after taxes fall below 10 per cent of stockholder's equity. In only two years did the rate of profits before taxes on

> stockholders' equity fall below 20 per cent. These are truly very high profit rates and it is clear that manufacturers can cut profit margins much more and still earn handsomely on their investment." ("Steel and the National Economy," p. 14.)

In both reports profits are thus found to be higher than prewar, relative to net worth. They are also found to be above 6 per cent—a so-called "fair and normal return," in the Union's judgment. From this the Union leaps to the conclusion that the return on investment in steel and all manufacturing is excessive. No attention whatsoever is paid to (a) the meaningfulness of such comparisons in a period of inflation or (b) the warrant of holding the rate of return of 6 per cent as "fair and normal" in such a period or for industries other than public utilities to which such standards have been applied in the past.

How Inflation Impairs Net Worth Comparisons

PURPORTED high returns on net worth are completely misleading. They reflect an inevitable fiction which arises during a period of inflation. Prices for current output necessarily respond more promptly to inflationary pressures than do book values of plant and equipment. Only as plant and equipment are retired and replaced are the higher price levels reflected on the books of the company. This necessarily is a slow process which takes a long period of years to complete. It is this lag which is largely responsible for the reported large returns on net worth. Profits are stated in current inflated dollars; net worth is stated in good part in old or "hard" dollars. The return on net worth gives no indication whatsoever of how much can be earned on dollars invested currently.

In arriving at the rate of return on net worth, it is imperative to recognize the distortions introduced by inflation in both the numerator and denominator of the equation; the base called net worth and the share called

$$\text{profits} \quad \frac{\text{profits after taxes}}{\text{net worth}} = \text{rate of return.}$$

Unless the rate of return is corrected for the two types of bias (which are reinforcing), it is so distorted that the comparisons are virtually meaningless, particularly over the longer-run.

In this connection, Professor R. C. Jones has noted:

> "It is now evident, however, that this ratio [of net business income to capital employed] can be quite *misleading* if it is computed in nonuniform historical dollars when the value of the dollar itself is changing at a significant rate. When the general level of prices is rising, that is, when the value of the dollar is falling, revenues are made up entirely of small current dollars while both expenses and invested capital are stated at least in part in older and larger dollars. This condition combined with the fact that net profit is usually a small percentage of gross revenues creates *a strong upward bias in nominal or apparent rates of return.* There seems still to be a tendency to underestimate the amount of bias in earning rates based on conventional statements, but the fact that a bias does exist is now generally admitted."[1] (*Italics* added.)

Turning first to the inadequacies of the net worth base, the pivotal point here is that the figures on investment as taken from company books relate to the past cost in years in which prices were significantly lower. In a period of inflation, prices for current output respond far more quickly to price changes than does the book value of fixed assets, particularly when, as in the case of the steel industry, there is a relatively low turnover of investment per dollar of sales. A significant pro-

[1] Jones, *op. cit.*, pp. 1 and 2.

portion of net worth continues to be comprised of investment in old or "hard" dollars and the return on net worth as a result gives no indication of what can be earned from a comparable investment of today's "soft" dollars.

This disparity in the respective time spans of the numerator and denominator of the rate of return equation can be more clearly seen if the frame of reference becomes not the cumulative total of past investments but instead, the cumulative total of the physical assets into which past dollars of investment were transformed. These investments appear on company books on the basis of *original* cost—in many instances in the hard or harder dollars of the prewar or immediate postwar years. Thus, net worth becomes a melange of assets that are always underpriced in a period of inflation and especially so in industries such as steel where assets are long-lived in character and where the net addition to fixed assets in any given year is but a small fraction of the total existing stock of capital assets.

Some measure of the extent to which the denominator (net worth) is affected by the use of original costs can be gained from a recent study by the United States Department of Commerce.[1] In terms of 1947 as 100, the prices of manufacturing structures and equipment in 1939, 1947 and 1955 were:

Year	Structures	Equipment	Structures & Equipment
1939	46	69	61
1947	100	100	100
1955	129	139	135
% Increase 1939-1955	180.4	101.4	121.3

These figures suggest that the original cost of a structure built in 1939 would have to be increased by 180 per cent to bring its value into line with the purchasing power of today's dollar of earnings with which it is being compared. Similarly, all fixed assets acquired in 1939 and in being today would have to be raised by 121 per cent to restate them in 1955 costs as compared with original costs. Even in the case of more recently added plant and equipment, the influence of inflation tends to bias downward the net worth figures. Equipment purchased as recently as 1947 generally cost nearly 40 per cent more to replace in 1955 while total fixed assets acquired would have to be raised 35 per cent to be stated in the same dollars as the 1955 profit figures. In addition, prices of producers' equipment rose 13 per cent from June 1955 to December 1956 so that early in 1957 the cost of replacement is considerably higher than in 1955.

The influence of this accumulated stock of capital goods valued at lower price levels upon estimates of current net worth is an item of major importance in profit-net worth comparisons. As estimated by the United States Department of Commerce, the total real net value of privately owned structures, equipment and inventories in manufacturing in 1939 was $58.5 billion (in 1947 dollars). The corresponding totals for 1947 and 1955 were $78.1 billion and $101.5 billion, respectively.[2] Thus, prewar and immediate postwar assets still represent a sizable proportion of today's physical assets in manufacturing industries. And what is directly in point, these are carried on the books of manufacturers at an original cost from a half to a third below their costs in today's market prices.

The longer life span of facilities employed in the production of steel aggravates the imperfections of the net worth base as developed above for all manufacturing. In 1939, total steel ingot capacity was 81.8 million tons ("Facts On Steel," p. 38), which was acquired at the price levels prevailing then and in earlier years. By 1947, steel ingot capacity had

[1] *Survey of Current Business*, November, 1956.

[2] *Survey of Current Business*, November, 1956, p. 14.

been raised to about 91 million tons, or about 10 million more than in 1939. Some old capacity had been retired but the preponderant bulk of the facilities then in being had been built at prices 26 per cent to 55 per cent below those prevailing in 1955. By 1956, capacity had been increased to 128.4 million tons or about 37.5 million tons above the 1947 total and 46.6 million tons more than in 1939. Even after allowance for facilities that have been retired over this period, it would appear that existing fixed assets in the steel industry would have to be increased significantly in value, in order to render the base of the profit-net worth ratio comparable with the current profit figure.

We have shown, therefore, that serious imperfections exist in the net worth data when employed as a basis for determining profitability in a period of sustained inflation or accelerated price increases in the cost of manufacturing structures and equipment. The use of original cost in the valuation of past investment significantly *understates* today's costs of plant and equipment to which today's profits are to be related and hence contributes toward the "phenomenal" rate of return criticized by the Union.

In contrast to the understatement of true net worth, a period of inflation leads to an overstatement of reported profits of corporations. First, legally permissible depreciation charges fall steadily behind the true costs of capital consumption in such periods. The extent of this profit overstatement and the significant degree to which profits of manufacturing corporations in general and steel companies in particular are overstated for reasons of depreciation inadequacy has been demonstrated above.

Secondly, the profits data may be overstated in a period of price inflation because the price rise contributes toward a fictitious element in book profits through the rising values of inventories. To the extent that the last in first out (lifo) method of handling inventory is used, this factor is not of importance. It does not affect the figures for United States Steel because the Corporation uses lifo.

Perhaps a simple illustration may indicate the nature of the problem created by inflation of prices. Let us assume a plant cost $100,000 before the war and had a life of twenty years. Also assume that the reported net worth of the company on the basis of the book figures is $100,000 and that reported profits after taxes in 1956 totaled $15,400, or an apparent return of 15.4 per cent on net worth based on prewar costs. In deriving this profit, $5,000 was deducted for depreciation. Actually, the plant would cost $200,000 to reproduce today and if allowance were made for this higher cost, there would be a doubling of depreciation charges to $10,000 and net worth would be increased to $200,000. After allowing for this increase in depreciation costs, the company would have profits after taxes of $12,960. But this would represent a return of only 6.5 per cent on the net worth at today's cost of $200,000, as compared with the 15.4 per cent apparent return on net worth based upon prewar costs. The following tabulation shows these calculations:

	Return on Recorded Net Worth	Return on Net Worth Adjusted to Reflect Replacement Cost
Net Worth	$100,000	$200,000
Gross income	100,000	100,000
Costs, other than depreciation	63,000	63,000
Depreciation	5,000	10,000
	32,000	27,000
Taxes (52%)	16,640	14,040
Profits after Taxes	15,360	12,960
Return on Net Worth	15.4%	6.5%

The reported returns on net worth not only involve a relationship to an understated value

of net worth, but also involve the overstatement of profits which results from the understatement of depreciation charges.

That the changes shown in the above hypothetical illustration may not be too far from reality is indicated by the results of a study of four companies made by Professor R. C. Jones of Yale University. When he allowed for the effects of inflation on the accounts of four companies, he found the following differences between reported profits and profits adjusted for the effects of inflation:[1]

	Average Rate of Return	
	Reported	Adjusted
	(per cent)	
Armstrong Cork Company		
1946-48	10.4	5.0
1949-51	10.1	5.8
The Reece Corporation		
1946-48	9.6	4.7
1949-51	7.3	4.3
Sargent & Company		
1946-48	9.5	3.3
1949-51	6.7	3.4
New York Telephone Company		
1946-48	6.3	3.3
1949-51	5.5	2.8

In connection with his evaluation of the New York Telephone Company, Professor Jones described the factors accounting for the difference between reported and adjusted average rates of return as follows:

> "There are two principal reasons why this economic or adjusted earning rate is only half as high as that shown by the historical or book figures. Adjusted expenses, principally depreciation, are higher (and net income lower) because preinflation costs are converted into their current-dollar equivalents. The adjusted investment is substantially larger than book investment because of a similar conversion of plant costs and capital contributions."[2]

[1] Jones, *op cit.*, p. 6.
[2] Jones, *op cit.*, pp. 17 and 18.

Thus, it is clear that it is mainly because of the impact of inflation upon the adequacy of depreciation charges and the level of net worth that Professor Jones found the adjusted average rate of return so much lower than that which was reported.

In other words, a considerably different picture emerges when *today's profits* based on *today's real costs* are related to *today's costs of plant and equipment* than is shown when profits are related to investment in terms of original prewar costs. *Returns on net worth largely reflect a comparison of overstated reported profits with understated net worth.* In terms of incentives for new investment, the 6.5 per cent figure, not the 15.4 per cent figure in the hypothetical case, represents the realistic alternative facing the executive and investor who must make decisions on the basis of such figures.

This problem is not unique to the steel industry. Thus, the Mountain States Telephone and Telegraph Company observed in its *1956 Annual Report* (page 9):

> "New plant to serve each new telephone is costing more on the average than has already been invested to serve each existing telephone. The volume from the new telephone is no more than from the existing telephone, but expenses such as property taxes and *depreciation* are greater. Thus *net earnings from the new telephone are less in the face of larger investment which calls for larger net earnings—a double barreled effect which we call attrition.*" (*Italics* added)

In summary, in the years in question profits are *overstated* because of (a) the inclusion of inventory profits which are not economically meaningful and (b) the understatement of depreciation by not allowing for the higher replacement costs in both instances. Of equal significance, the estimates of net worth are drastically *understated*. The inherent defects in the numerator and de-

nominator are not offsetting. Instead, they are reinforcing so that the inevitable result is a reported rate of return which the Union misinterprets as evidence that current profits are far above a "fair and normal" return.

Actually, the comparisons can have no economic meaning over the period the Union selects, unless profits and net worth are both expressed in a common price level. As was shown above, when correction is made for the influence of inflation not only are profits sharply reduced through warranted depreciation and inventory adjustments, but also the value of past investment is greatly raised in terms of today's prices. The two types of corrections when applied go far to deflate the Union's conclusions about "phenomenal" rates of return on investment.

A final brief comment may be offered on the Union's advocacy of a return of 6 per cent as "fair and normal" reward or incentive to investors. Where this rate has been employed in the past for public determination of a warranted return on investment, it has been confined to public utilities and related industries. The industries in question are subject to public regulation, have monopoly or quasi-monopoly powers, and are not exposed to the same cyclical vulnerabilities as are most manufacturing industries, and especially steel. The element of risk is far less significant in public utilities than in manufacturing. The services rendered are necessities, surrounded with the public interest and with little opportunity for resort to substitute services or materials.

These elements of economic distinction are so well known that it seems unnecessary to do more than outline the basic differences between the function of profits of a publicly-regulated industry and the function of profits in freely competitive enterprise. In this connection, one can only repeat the telling criticism by Sumner Slichter of the failure of Robert Nathan in his 1946 report to grasp the true purpose of profits in our economy. As Dr. Slichter so aptly put it, "One of the most unsatisfactory parts of Mr. Nathan's report is its failure to understand the role of profits in the modern economy. Profits are the reward for two peculiarly useful activities. They are the return which business owners receive on equity capital and they are the yardstick by which managers demonstrate their efficiency to their employers by developing new methods and new products. Hence, the opportunity to make a profit is an incentive for investors to put more equity capital into industry and for managements to make more innovations. The striving of the owner operators and the managers of more than ten million business enterprises, agricultural and non-agricultural, to make more profit is what makes the American economy the most progressive and dynamic in the world."[1]

Return on Net Assets: Steel and Other Manufacturing Industries

DESPITE the limitations of returns on net worth, the Union Brief has given such emphasis to this concept that it is of interest to compare the record in the steel industry and in other industries. The First National City Bank of New York publishes data for the iron and steel industry and other industries showing the return on net assets each year. The 1955 data appeared in the Bank's Monthly Letter for April 1956. The tabulation covered 56 iron and steel companies with book net assets of $7,181 million as of January 1, 1955. The survey showed a return of 15.2 per cent for the iron and steel industry. The average return for *all manufacturing* was 15.0 per cent or 0.2 percentage points lower than for iron and steel. Out of 40 other *manufacturing groups* for which data were reported, the return on net book assets was

[1] *New York Herald Tribune*, December 20, 1946.

TABLE 22

Returns on Net Assets[1] for All Manufacturing Industries and the Iron and Steel Industry, 1925-1956 (After Taxes)

Year	All Manufacturing	Iron and Steel	Excess for all Manufacturing over Iron and Steel
	per cent		
1925	10.7	5.8	4.9
1926	10.8	7.3	3.5
1927	9.0	5.3	3.7
1928	11.6	7.0	4.6
1929	12.8	11.2	1.6
1930	6.4	4.5	1.9
1931	2.3	− 0.5	2.8
1932	− 0.5	− 4.0	3.5
1933	2.5	− 1.9	4.4
1934	4.3	− 0.4	4.7
1935	6.7	1.3	5.4
1936	10.4	4.7	5.7
1937	10.8	6.9	3.9
1938	4.8	− 0.2	5.0
1939	8.5	4.5	4.0
1940	10.3	8.5	1.8
1941	12.4	9.6	2.8
1942	10.1	6.5	3.6
1943	9.9	5.6	4.3
1944	9.8	5.2	4.6
1945	9.3	5.1	4.2
1946	12.1	7.5	4.6
1947	17.1	11.3	5.8
1948	18.2	13.9	4.3
1949	13.8	11.5	2.3
1950	17.1	15.3	1.8
1951	14.4	12.3	2.1
1952	12.3	8.8	3.5
1953	12.5	11.6	0.9
1954	12.4	9.4	3.0
1955	15.0	15.2	− 0.2
1956	13.9	13.9	0

[1]Net assets at the beginning of each year are based upon the excess of total balance sheet assets over liabilities; the *amounts at which assets are carried on the books are far below present-day values.* (*Italics* added).

Source: First National City Bank of New York, *Monthly Letter On Economic Conditions*, April issue of each year.

higher in 13 industries; lower in 27 industries. The manufacturing industries which reported return on net assets of 15 per cent or more in 1955 were the following:

	Per Cent Return on Net Assets
Autos and trucks	29.1
Aircraft and parts	24.7
Glass products	20.5
Cement	20.3
Drugs and medicines	18.3
Chemical products	17.7
Instruments, photo goods, etc.	17.7
Office equipment	16.9
Nonferrous metals	16.7
Other stone, clay products	16.4
Paint and varnish	16.4
Soap, cosmetics, etc.	16.0
Automobile parts	15.3
Iron and steel	15.2
Tires, rubber products	15.1
Total Manufacturing	15.0

In connection with these data, the Bank warns:

> "Since the book net assets, or excess of total reported assets over liabilities, are carried on the balance sheets in most cases far below present-day values, the rates of return thereon are correspondingly higher than if computed on the basis of actual replacement costs." (p. 42.)

As was noted earlier, this qualification is more important for the steel industry than for many other manufacturing industries. This situation has contributed to the relatively more favorable reported return on net assets for the steel industry as compared with all manufacturing industries in recent years. Table 22 shows the First National City Bank data since 1925. The Union in its Brief, has emphasized the changes since 1947 ("Facts On Steel," p. 8), and noted that the return for all manufacturing has declined while that for the steel industry has increased since 1947.

An examination of Table 22 indicates that the 1947 return of 17.1 per cent on net assets for all manufacturing has been exceeded only once in the 32 years for which the statistics have been compiled. In fact, the spread of 5.8 points for all manufacturing as compared with the steel industry in 1947 was the *widest* for any year for which the data are available. Thus, by using 1947 as a base period, the Union was able to show the maximum contraction of spread between all manufacturing and the steel industry.

Actually 1955 was the only year in which the return on net assets for steel companies exceeded that for leading manufacturing companies. Thus, the 1955 results were relatively favorable because the steel industry finally reported a return on net assets equal to all manufacturing industries. However, if corrections could be made for the inadequacies of these data, it is questionable whether the steel industry would have such a favorable relationship. The return on net assets for the steel industry in 1955 was fractionally below the previous peak in 1950. Even in boom years like 1929 (1.6 per cent), 1950 (1.8 per cent), and 1953 (0.9 per cent) the return on net assets for all manufacturing was moderately higher than for the steel industry.

The Level of Steel Profits

STEEL profits are described by the Union as being "at a fabulous and exorbitantly high level. . . . The steady and almost uninterrupted increase in the profits of the industry," the report continues, "are readily apparent from even a cursory inspection of its own financial reports." ("Facts On Steel," p. 9.) In the evidence advanced to support this contention little or no mention is made of the expanding economy in which the steel industry has operated. Indeed, the whole section labeled "The Financial Position of the Steel Industry" is seemingly designed to focus attention upon profits in the steel industry as if they were completely divorced or detached from the inflation-stimulated economy in which such profits were earned. The so-termed "unparal-

leled prosperity" of the industry assumes quite different dimensions when viewed against the unparalleled growth which also characterized virtually every other type of economic activity during the period chosen by the Union for its appraisal of steel profits alone.

With total national economic activity in dollar terms nearly five times what it was pre-World War II, the Union's conclusions that steel profits are unprecedented, unparalleled or unmatched in any previous year is obviously meaningless. These same terms could be applied to many other industries. Profits by their very nature, particularly in the steel industry, are the most volatile of all payments for the factors of production. They contract far more than does any other share of national income in a period of recession or depression. Traditionally, too, they rise more rapidly than other factors of production in periods of boom or expansion.

At the outset, it should be noted that the Union's projections of profits for 1956 were not realized. As compared with the projected increase of 15.3 per cent for 1956, profits increased only 1.4 per cent for the steel industry. For United States Steel Corporation, profits for 1956 were estimated by the Union at $416.8 million on the basis of first quarter results. As compared with this projected rise of 12.6 per cent, profits actually *declined* from $370.1 million to $348.1 million or by 5.9 per cent in 1956. Here is a dramatic illustration of the dangers inherent in attempts to project steel trends on the basis of very short term experience. (The steel strike in the third quarter of 1956 affected these comparisons.)

Clearly, 1955 was one of the best years ever experienced in the steel industry, as it was for virtually all industry. National income in that year was higher in dollar terms than in any preceding year, as was the income originated by corporate business. In evaluating the significance of these data, therefore, it is important to keep in mind the expansionary environment which brought total revenues and total production in the steel industry to record levels along with the rest of the corporate economy—as well as the phantom profits included in the steel industry total.

The following observations serve to set steel profits in 1955 in necessary economic perspective:

1. Steel production and total revenues reached all-time record levels in 1955. This was not a unique development within the steel industry but rather, our entire economy moved forward from a gross national product of little more than $367.1 billion at the start of 1955 to slightly above the $400 billion level at the year end. Corporate profits before taxes were at an all-time high in 1955. The United States Department of Commerce in its annual review for 1955 offered this commentary on total corporate profits in that year.

> "Corporate profits before taxes as measured for national income purposes, excluding inventory gains and losses, recovered sharply last year. The advance from 1954 amounted to one-fifth, or more than $7 billion, and carried the total for 1955 past the $41 billion mark, $4 billion above 1953 and *more than $1 billion above the previous all time high for 1951.* . . . During 1955 . . . increased profits in almost every segment of corporate business accompanied the spreading of recovery and the transition from recovery to net new growth in the national income."[1] (*Italics* added.)

Under these conditions, with demand and output rising so sharply, it would be anticipated that steel profits should also be at a record level.

Merely because steel profits achieved these record levels does not prove that they are too high any more than record levels of hourly earnings of steelworkers provides evidence that they are too high. The Union's emphasis

[1] *Survey of Current Business*, February 1956, p. 15.

is primarily upon the income flowing to the steel industry with little recognition of the enlarged contribution of the industry which called forth this larger return.

The Union's approach in effect ignores the sharp rise in steel capacity in recent years (from 99.4 million tons on January 1, 1950 to 128.4 million tons on January 1, 1956). It pays only lip service at best to the accompanying investment of billions of dollars in new and improved facilities. By stressing the *absolute* size of profits it implies that the steel industry should not be earning larger profits as its physical contribution to the nation's total product is enlarged.

2. Total production of steel in 1955 was 28.7 million tons more or 32.5 per cent *greater* than in 1954 and 20.2 million tons more or 20.9 per cent higher than in the previous record profit year of 1950. Sharp increases in profits would be anticipated under these conditions.

In connection with the expansion in physical output in the entire economy, the United States Department of Commerce again offers desirable economic perspective:

> "Industrial production advanced steadily through most of 1955 under the stimulus of rising consumer and business demand. The physical volume of production for the year as a whole was 11 per cent higher than in 1954 and 4 per cent above the previous peak reached in 1953. . . .
>
> "Automobiles and the primary metals industries, with approximately one-eighth of the weight in the Federal Reserve index, accounted for roughly one-third of the 10 per cent rise in total industrial output and for two-thirds of the rise in the durable goods group from the third quarter of 1954 through April 1955, when the peak rate of automobile production was reached.
>
> "The enlarged manufacturing output was made possible by a record flow of materials and supplies. During the course of the year, industries producing basic raw materials geared operations upward in line with the rising demands.
>
> "Thus production of primary metals expanded sharply in 1955 to meet the large requirements from motor vehicles and other metal fabricating plants. *Steel-making facilities turned out a record 117 million tons of steel ingots and castings, over 5 million tons more than in 1953, the previous top.* An equally impressive tonnage of finished steel products was produced. *The total of 84.7 million tons of finished steel exceeded the high 1953 volume by 4.5 million tons.* . . .
>
> "For the ninth consecutive year, the industry added to its steel-making capacity. The net expansion of capacity of 2.5 million tons of steel ingots and castings brought total rated capacity to 128.4 million tons as of January 1, 1956. This total represents a net gain of over 37 million tons, or two-fifths in the 9 year period since 1946."[1] (*Italics* added.)

3. Total revenues of the steel industry from all sources in 1955 were $14.0 billion, or 32.6 per cent greater than in 1954. However, it was only 6.8 per cent greater than in 1953 or about the same rate of increase as in the *physical* output of finished steel products cited by the Department of Commerce (5.7 per cent). In fact, the increase in profits after taxes since 1950 (40.1 per cent) has been about in line with the increase in revenues (47.3 per cent) since that year.

4. It is to be expected that steel profits would increase sharply in years such as 1955 when output and revenues were rebounding from the contracting phase of the business cycle and were rising to record levels. The importance of overhead costs in the steel industry would normally mean that profit ratios would increase much more sharply than volume during years in which the latter increases.

[1] *Survey of Current Business*, February, 1956, p.21.

Steel Prices, Profits, Productivity, and Wages

The converse is also true. Sharp and abrupt declines in volume touch off a shrinkage in profits more marked than the decline in either volume or revenues. Except when changes in the Federal income tax have acted to reduce the level of profits after taxes (for example, 1951) changes in volume have had a significant impact upon reported profits. In 1954, a decline of 19.5 per cent in total revenues and 20.9 per cent in production was accompanied by a decline of 29.0 per cent in profits before taxes. Because of the elimination of the excess profits tax in that year, however, profits after taxes fell only 13.3 per cent.

The large percentage increase in profits in 1955 reflected not only the tremendous increase in total revenues and steel production but also the relatively low base from which the profit increase was measured, namely, the depressed level of 1954. The recession in 1954 was far more marked in manufacturing than it was for the national economy as a whole. The United States Department of Commerce has observed:

> "Manufacturing, mining and transportation, *in which the decline after mid-1953 was mainly concentrated, showed a marked resurgence, with the first two of them rising to even higher levels than before the downturn.* The declines in these industries had reflected the drop in expenditures for hard goods that had resulted primarily from the cutbacks in national defense outlays and in business inventory investment. Their subsequent resurgence mirrored the recovery last year [1955] in hard goods production, which was of civilian origin, and the advance in other types of output as well."[1] (*Italics* added.)

Gross national product declined only nominally (0.7 per cent) during 1954, as did national income (1.3 per cent). But corporate profits before taxes fell by 10.3 per cent and profits in manufacturing by 15.1 per cent.

	Per Cent Change 1953-1954	1954-1955
Gross National Product	− 0.7	+ 8.4
National Income	− 1.3	+ 8.6
Corporate Profits Before Taxes	− 10.3	+ 28.6
Manufacturing Profits Before Taxes	− 15.1	+ 34.4

Source: Survey of Current Business, January 1957, pp. 4 and 5, and *Economic Report of the President,* January 1957, pp. 123, 132.

Steel profits before taxes fell by 29 per cent in 1954 relatively twice as much as the profit decline for all manufacturing. They rose more rapidly than did all manufacturing profits in 1955, in part because steel output was expanded far more sharply than the corresponding rise in total industrial production. The Federal Reserve Board's index of manufacturing production advanced from 127 (1947-49 = 100) in 1954 to 140 in 1955 or by 10.2 per cent. Steel output, in contrast, was expanded by nearly one-third or three times the rate of manufacturing industry. All manufacturing profits suffered from the recession of 1954 and showed the cyclical rebound in profits from 1954 to 1955. Steel profits in terms of percentage increase over 1954 also reflect the influence of the cycle but in addition were affected by the sharper rate of growth in physical output from 1954 to 1955 than for all manufacturing industries.

5. In an industry which has experienced wide fluctuations in output over the years, it is dangerous to assume that the level of profits in a boom year like 1955 represents normal earning power. Even moderate declines in volume can mean sharp declines in profits as we have seen several times in recent years. It should be borne in mind that these figures relate to the full employment economy of the past decade.

It is useful to recall what happened be-

[1] *Survey of Current Business,* February 1956, p. 13.

tween 1937 and 1938. The pertinent data were as follows:

	1937	1938	Per Cent Change
	(millions)		
Steel production (tons)	56.6	31.8	— 43.8
Total sales (dollars)	2688.0	1605.3	— 40.3
Profits before taxes (dollars)	251.7	—14.4	—100.0

The 1937-38 recession witnessed a decline of 43.8 per cent in steel production and 40.3 per cent in total sales. As a result of this decline in volume, profits before taxes were wiped out and a deficit was incurred.

In 5 of the 12 years since 1944, steel production has declined. These annual declines have ranged from a minimum of 11.0 per cent to a maximum of 20.9 per cent. (If the changes were measured from the peak to bottom month or week, the magnitude of declines would be considerably greater.)

Percentage Changes From Preceding Year For Steel Industry In:

Year	Production	Total Revenues	Profits Before Taxes
1945	—11.1	—10.5	—36.4
1946	—16.4	—18.7	+30.5
1949	—12.0	— 8.4	— 2.5
1952	—11.4	— 8.3	—47.8
1954	—20.9	—19.5	—29.0

Gross national product is most frequently cited by those who say that the economy is becoming more stable. The most severe decline in total national economic activity during this period came in 1946, when gross national product declined by only 2.0 per cent. In 1948-49 and 1953-54, the corresponding declines in gross national product (in current dollars) were nominal.

In *constant* dollars, there was somewhat less stability; the percentage declines in gross national product (in 1947 dollars) were: 11.1 per cent in 1945-46; 1.0 per cent in 1948-49; 1.5 per cent in 1953-54. The declines would be greater on a quarterly basis, from peak to trough, in terms of real gross national product.

It is significant to note that output in the steel industry continues to record wider fluctuations than for the economy as a whole. Moreover, the 1954 decline in steel output was greater than the preceding four declines. The declines in total steel revenues have closely paralleled the declines in steel output. For purposes of comparison, profits before taxes are used so that the relationships are not influenced by changes in corporate tax rates. In three of the five years of recent experience with a decline in output, steel profits before taxes fell by more than 25 per cent. Included in this category are the two most recent declines, 1952 and 1954.

In light of the record for this industry, even in as favorable an economic environment as the first decade following World War II, it is dangerous to hold that the 1955 experience represents a level of profits which could have been reduced safely. To reduce profit margins obtained at boomtime levels to some assumed average level would increase the steel industry's *vulnerability* to any future declines in volume. To repeat, there is little warrant in the actual historic record of the past decade for the conclusion that the steel industry's profits are not inseparably linked to changes in volume from the trough to the peak of the business cycle as well as from peak to trough.

IX. FINANCING EXPANSION

THE Union brief claims that:

> "Risk capital, according to most business spokesmen and economic textbooks, is the source of funds for business investment in the American economy. A business firm that seeks to expand its productive capacity floats new stock issues and sells them to investors. In that way, the company increases its funds for expansion and spreads its ownership." ("Steel and the National Economy," p. 17.)

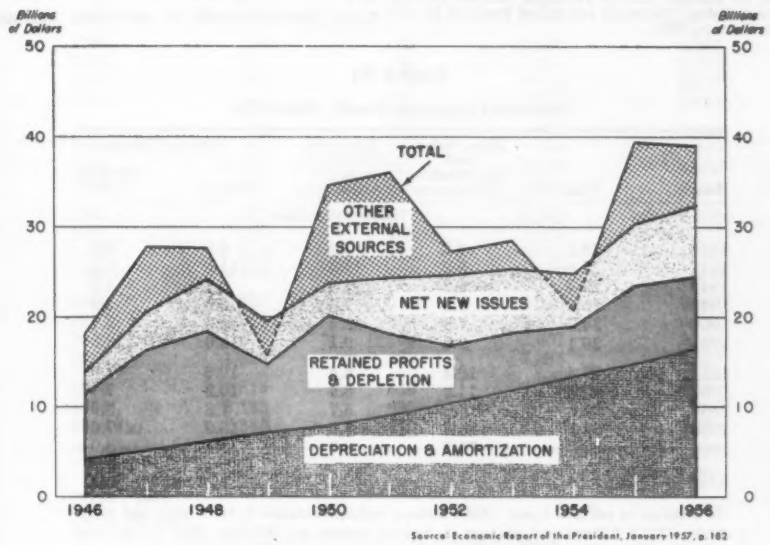
The brief then states "This is a good theory, but it does not seem to be working in practice."

Neither in theory nor in practice does business depend solely on the sale of stocks to obtain funds required to finance expansion in productive capacity. In fact, in recent years, the major sources of funds have been internal. An examination of leading textbooks shows that they all emphasize that conventionally and traditionally funds are raised from both internal and external sources. The major *internal sources* are retained profits and depreciation allowances. The main *external sources* are the sale of new security issues (bonds, preferred stock, or common stock) and borrowing from financial institutions (banks and insurance companies). It will be noted that stocks, which the Union empha-

Chart No. 18

SOURCES OF CORPORATE FUNDS

1946-1956



Source: Economic Report of the President, January 1957, p. 182

95009 O—58—pt. 4——22

sizes, provide only one form of external financing.

Depreciation allowances may improve the cash flow or liquid position of a company. But they do not form the basis for new investment or expansion. They are used largely to replace existing plant and equipment. In fact, as was noted in a previous section, under present tax laws depreciation allowances often are inadequate to replace at present prices assets earlier acquired at sharply lower price levels.[1] Thus, part of the retained earnings in recent years has been required to meet the inadequacy of depreciation to replace equipment at today's higher prices.

The excerpts cited in Appendix B show that the various authorities do not agree that American business has relied or should rely solely or primarily upon new stock issues in order to finance expansion in productive capacity. In fact, the Union brief recognizes that these other sources of capital have been important when it states:

> "The major source of corporate funds for expansion is *internal financing*—retained profits after the distribution of dividends and depreciation allowances. There has been some borrowing from banks and insurance companies and very limited flotations of corporate bonds. The overwhelming portion of funds for corporate expansion has come from retained profits and depreciation charges." ("Steel and the National Economy," p. 17) (*Italics* added)

The Union purports to find that this situation is contrary to theory. Actually, it is in accord with theory and is a well accepted practice as an examination of past experience shows.

Sources of Financing for American Industry

INTERNAL sources of financing have provided a relatively significant proportion of the total financial needs of American industry

[1] See, for example, George Terborgh, *Realistic Depreciation Policy*, Machinery and Allied Products Institute, Chicago, 1954.

TABLE 23

Sources of Corporate Funds, 1946-1956

Year	Total	Depreciation and Amortization Allowances	Retained Profits and Depletion Allowances	External Sources	
				Total[1]	Net New Issues
	billions of dollars				
1946	18.2	4.2	7.2	6.8	2.4
1947	27.9	5.2	11.4	11.3	4.4
1948	27.7	6.2	12.4	9.1	5.9
1949	15.6	7.1	7.6	0.9	4.9
1950	34.7	7.8	12.4	14.5	3.7
1951	36.1	9.0	9.1	18.0	6.3
1952	27.4	10.4	6.4	10.6	7.9
1953	28.5	11.8	6.5	10.2	7.1
1954	20.8	13.3	5.7	1.8	5.9
1955	39.5	14.8	8.8	15.9	7.0
1956	39.0	16.5	8.0	14.5	8.0
1946-56	315.4	106.3	95.5	113.6	63.5

[1] In addition to net new issues ($63.5 billion) includes changes in bank loans and mortgages ($27.8 billion) and changes in Federal income tax liability ($6.8 billion) and other liabilities ($15.5 billion).

Source: Economic Report of the President, January 1957, p. 182.

over the years. Table 23 and Chart 18 present data showing the sources of corporate funds for all businesses for the years 1946 to 1956. For the entire period, the three main sources of funds, namely, depreciation, retained profits, and external sources, were almost of equal importance.

It will be noted that the sale of securities accounted for only one-fifth of the total corporate funds available to finance replacement and expansion for the 1946-56 period. If depreciation allowances are excluded, then the sale of securities yielded 30 per cent of the funds available for expansion. The ratios were approximately the same in 1956.

	Per Cent of Total
Internal Sources	64.0
Depreciation and Amortization Allowances	33.7
Retained Profits and Depletion Allowances	30.3
External Sources	36.0
Net New Issues	20.1
Other External	15.9
Total	100.0

TABLE 24

Gross Proceeds of Corporate Securities Offered for Cash—1934-1956*

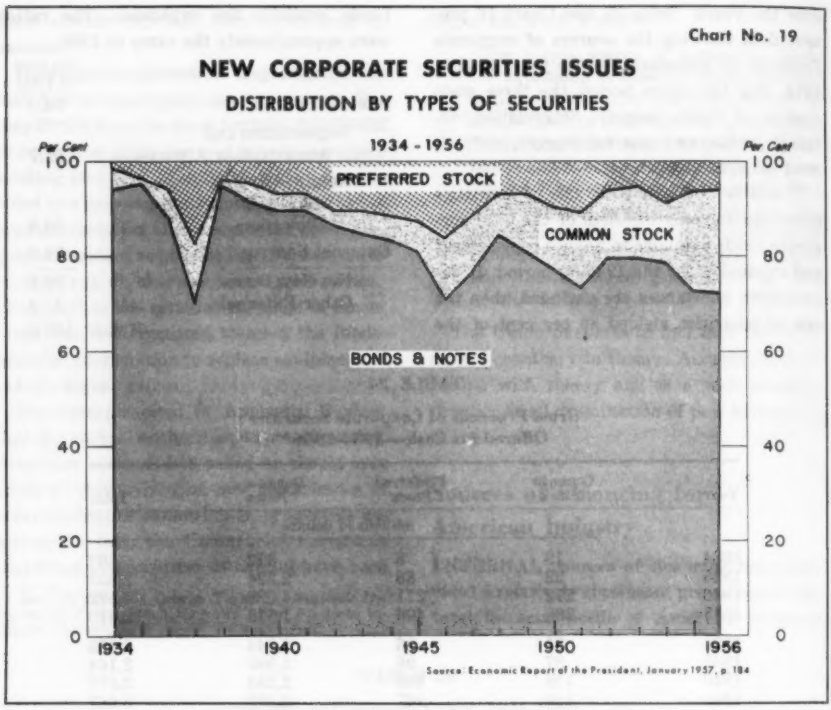
Year	Common Stock	Preferred Stock	Bonds and Notes	Total
	millions of dollars			
1934	19	6	372	397
1935	22	86	2,224	2,332
1936	272	271	4,028	4,572
1937	285	406	1,618	2,310
1938	25	86	2,044	2,155
1939	87	98	1,980	2,164
1940	108	183	2,386	2,677
1941	110	167	2,390	2,667
1942	34	112	917	1,062
1943	56	124	990	1,170
1944	163	369	2,670	3,202
1945	397	758	4,855	6,011
1946	891	1,127	4,882	6,900
1947	779	762	5,036	6,577
1948	614	492	5,973	7,078
1949	736	425	4,890	6,052
1950	811	631	4,920	6,361
1951	1,212	838	5,691	7,741
1952	1,369	564	7,601	9,534
1953	1,326	489	7,083	8,898
1954	1,213	816	7,488	9,516
1955	2,185	635	7,420	10,240
1956 (p)	2,380	660	7,910	10,950

* These data cover substantially all new issues of corporate securities offered for cash sale in the United States in amounts over $100,000 and with terms to maturity of more than 1 year.

(p) preliminary.

Note: Detail will not necessarily add to totals because of rounding.

Source: Economic Report of the President, January 1957, p. 184.



Common stock and preferred stock have accounted for only a small proportion of the 20.1 per cent of the funds obtained from the sale of securities. For example, in 1956, according to the estimates of the Securities and Exchange Commission, total new security issues amounted to $10,950 million. Of this total, $2,380 million or 21.7 per cent was common stock and $660 million or 6.0 per cent was preferred stocks. The total for all stocks was $3,040 million or 27.8 per cent. (See Table 24.)

The funds obtained from the sale of stocks accounted for only 7.8 per cent of the total funds raised by American corporations from all sources in 1956. If depreciation allowances are excluded, the sale of stocks provided 13.5 per cent of the funds required to finance the expansion in corporate productive capacity in 1956.

It should be noted that the data for total net security issues and the data upon which the estimates for the relative importance of stock are based are not strictly comparable. However, they do show the approximate magnitudes involved.

Table 25 and Chart 19 show the proportions of stock and bond financing for all corporations since 1934. Clearly, only a small part of the securities sold to finance the expansion of American industry during the past two decades has been in the form of new stock issues. Moreover, it should be noted that in many years a large proportion of the

stocks were sold by public utility and communications companies rather than manufacturing companies. (See Table 26.) For example, public utility and communications companies accounted for $790.8 million out of $2,440.9 million of new stock issues sold in 1955. In 1954, those industries accounted for $765.2 million out of a total of $1,658.2 million.

Illustrations of Major Reliance Upon Internal Financing

THE growth of a number of large companies has been financed very substantially from internal sources of capital. Included in this group are such companies as: Ford Motor Company, International Business Machines Corporation, Campbell Soup, General Motors Corporation, General Electric Corporation, F. W. Woolworth & Company, and the Aluminum Company of America. Unfortunately, detailed data concerning these developments are not readily available although some studies have been made for selected purposes.

The dependence upon internal sources of capital is not a development of the post World War II years. It has been a typical situation in this country for many years. For example, O. J. Curry studied the methods of financing expansion for 72 companies for the period 1922-1930. Table 27 shows his findings. The tabulation also shows the magnitude of the expansion in assets financed by retained earnings between 1922 and 1930. The Curry study lists *22 companies which financed their entire expansion from retained earnings.* There were 10 additional companies for which four-fifths or more of the expansion was financed out of retained earnings. Of the remaining

TABLE 25

Per Cent Distribution of Gross Proceeds of Offerings of Corporate Securities, 1934-1956

Year	Common Stock	Preferred Stock	Bonds and Notes
1934	4.8	1.5	93.7
1935	0.9	3.7	95.4
1936	6.0	5.9	88.1
1937	12.3	17.6	70.1
1938	1.2	4.0	94.8
1939	4.0	4.5	91.5
1940	4.0	6.9	89.1
1941	4.1	6.3	89.6
1942	3.2	10.5	86.3
1943	4.8	10.6	84.6
1944	5.1	11.5	83.4
1945	6.6	12.6	80.8
1946	12.9	16.3	70.8
1947	11.8	11.6	76.6
1948	8.7	6.9	84.4
1949	12.2	7.0	80.8
1950	12.7	9.9	77.4
1951	15.7	10.8	73.5
1952	14.4	5.9	79.7
1953	14.9	5.5	79.6
1954	12.7	8.6	78.7
1955	21.3	6.2	72.5
1956	21.7	6.0	72.3

Source: Derived from *Economic Report of the President,* January 1957, p. 184.

TABLE 26

New Stock Issues of Public Utility and Communication Companies in Relation to All Corporations, 1939-1955

Year	Public Utility and Communication Companies	All Corporations	Public Utility as Per Cent of Total
	millions of dollars		
1939	5.5	96.8	5.7
1940	27.9	135.3	20.6
1941	25.7	172.9	14.9
1942	33.5	118.8	28.2
1943	2.4	91.7	2.6
1944	23.2	224.0	10.4
1945	26.3	664.7	4.0
1946	142.9	1,480.3	9.7
1947	283.6	1,233.1	23.0
1948	379.0	912.3	41.5
1949	706.8	973.6	72.6
1950	723.8	1,233.8	58.7
1951	775.6	1,665.0	46.6
1952	860.0	1,772.8	48.5
1953	939.3	1,606.5	58.5
1954	765.2	1,658.2	46.1
1955	790.8	2,440.9	32.4

Source: Commercial and Financial Chronicle.

40 companies included in the study, only two financed solely through external means. All of the others used varying proportions of internal and external financing. As the table shows, the experience of steel companies varied widely.

TABLE 27

Methods of Financing Expansion—Seventy-Two Companies, 1922-1930

Name of Company	Per Cent from Retained Earnings	Extent of Expansion From Retained Earnings*
		(per cent)
Allied Chemical & Dye Corp.	100	42
American Can Co.	100	51
Coca-Cola Co.	100	117
Deere & Co.	100	37
General Electric Co.	100	44
Hart, Schaffner & Marx	100	44
Hershey Chocolate Corp.	100	121
Hudson Motor Car Co.	100	383
Motor Wheel Corp.	100	66
Nash-Kelvinator Corp.	100	268
National Acme Co.	100	5
New York Air Brake Co.	100	28
Packard Motor Car Co.	100	80
Quaker Oats Co.	100	63
Reo Motor Car Co.	100	78
R. J. Reynolds Tobacco Co.	100	107
Sears, Roebuck & Co.	100	85
Spicer Manufacturing Corp.	100	70
Timken Roller Bearing Co.	100	207
United States Steel Corp.	100	15

TABLE 27 (continued)

Name of Company	Per Cent from Retained Earnings	Extent of Expansion From Retained Earnings*
		(per cent)
F. W. Woolworth Co.	100	108
Worthington Pump & Machinery Corp.	100	6
Wm. Wrigley, Jr. Co.	98	137
Corn Products Refining Co.	97	21
Pittsburgh Plate Glass Co.	97	56
Otis Elevator Co.	95	98
California Packing Corp.	92	47
American Brake Shoe & Foundry Co.	89	45
Electric Storage Battery Co.	89	27
Loose-Wiles Biscuit Co.	86	39
International Harvester Co.	81	34
General Motors Corp.	80	119
S. S. Kresge Co.	78	228
General Cigar Company, Inc.	75	29
May Department Stores Co.	74	59
United States Rubber Co.	74	13
Mathieson Alkali Works, Inc.	71	75
Westinghouse Electric & Manufacturing Co.	71	40
Mack Trucks, Inc.	70	87
Commercial Solvents Corp.	69	38
Lima Locomotive Works	69	16
American Tobacco Co.	67	41
Liggett & Myers Tobacco Co.	66	58
Chicago Pneumatic Tool Co.	65	18
J. I. Case Co.	64	43
J. C. Penney Co.	64	371
Owens-Illinois Glass Co.	61	35
Goodyear Tire and Rubber Co.	58	32
Fairbanks, Morse & Co.	58	34
National Biscuit Co.	54	30
Chrysler Corp.	53	117
Union Carbide & Carbon Corp.	52	37
Mullins Manufacturing Corp.	50	57
Allis-Chalmers Manufacturing Co.	49	13
Air Reduction Company, Inc.	45	114
Inland Steel Co.	42	46
Continental Can Company, Inc.	41	108
B. F. Goodrich Co.	41	27
Pillsbury Flour Mills Co.	38	159
E. I. du Pont de Nemours & Co.	37	23
Firestone Tire and Rubber Co.	36	103
Borden Co.	35	104
Crucible Steel Co. of America	32	2
Consolidated Cigar Company, Inc.	29	91
Wheeling Steel Corp.	27	13
Baldwin Locomotive Works	27	9
American Cyanamid & Chemical Corp.	19	36
Gulf States Steel Corp.	18	16
Bethlehem Steel Corp.	18	17
Republic Steel Corp.	3	5
American Locomotive Co.	0	− 18**
American Car and Foundry Co.	0	− 3**

* 1922-30 retained earnings as a per cent of 1921 assets.

** Net liquidation.

Source: O. J. Curry, *Utilization of Corporate Profits in Prosperity and Depression, Michigan Business Studies*, Vol. IX, No. 4, University of Michigan, Ann Arbor, 1941, pp. 37 and 38.

It is clear, therefore, that during the rapid expansion of the 1920's many companies met their requirements for expansion largely out of retained earnings while other companies had varying degrees of dependence on retained earnings.

Richard J. Gonzalez has summarized the use of internal financing in the *petroleum industry* as follows:

> "Earnings retained in the business and funds recovered from previous expenditures by depreciation and similar charges are mainly relied upon in the financing of new investments in the petroleum industry. It is *exceptional* among the large oil companies for the amount of outside funds secured (through new equity financing or borrowing) to amount to as much as 25 per cent of the capital expenditures over a five-year period. Even during the postwar years of heavy capital expenditures, 1946-1950, twenty principal oil companies raised from outside sources an amount equal to only 15 per cent of their capital expenditures."[1] (*Italics* added.)

One of the outstanding illustrations of growth through internal financing has been the Ford Motor Company. Throughout its long history, this company was privately owned. However, in 1956, the company's common stock was sold to the public by the Ford Foundation. None of the proceeds went to the Ford Motor Company. As of September 30, 1955, the company reported total assets of $2,483 million. Its earned surplus at that time was $1,310 million plus $415 million which had been transferred to capital surplus, or a total of $1,725 million.[2]

As these illustrations show, there is nothing unique about relying heavily upon internal financing. The statements in the Union Brief reflect a complete misunderstanding of the "financial facts of life."

In contrast to this heavy dependence on internal sources of capital for manufacturing companies, public utility and communications companies have relied much more heavily upon the sale of bonds and stocks to meet their needs for funds to finance growth. The American Telephone and Telegraph Company, for example, has sold issues involving hundreds of millions of dollars periodically during the post World War II period. Similarly, the offering of rights to subscribe to new common stock has been a familiar development among electric utility companies in recent years.

Sources of Steel Industry Financing

IN a table on page 39 of "Facts On Steel," the Union purports to show the money available for replacement and expansion of facilities in the basic steel industry for the years 1953-55. According to the data presented the sources of funds were as follows:

	Millions of Dollars
Charges for Depreciation	2,304
Undistributed Profits	1,663
Cash Available from Operating Profits	3,967
Increase in Long Term Debt	167
Total	4,134

The Union improperly includes charges for depreciation as "cash available from operating profits." Depreciation charges are a proper operating expense and hence are not part of operating profits. Such profits are calculated *after* depreciation and after taxes. The total cash available for reinvestment from operating profits was $1,663 million not $3,967 million as shown in the Union brief.

[1] Richard J. Gonzalez, "Regularizing Petroleum Investment." *Regularization of Business Investment*, A Conference of the Universities—National Bureau Committee for Economic Research, Princeton University Press, 1954, p. 138.

[2] *Prospectus, Ford Motor Company*, January 17, 1956, pp. 31 and 35.

The Union states that only 4 per cent of the cash available for reinvestment "represented borrowed 'outside' capital." ("Facts On Steel," p. 39.) Actually, the sum of outside financing was considerably larger than shown.

The Union obtains the result shown by limiting its comparisons to the 1953-1955 period and by ignoring some transactions, such as the conversion of convertible bonds into common stock. For example, $14,181,100 of Wheeling Steel Corporation bonds were converted into common stock in 1955 (*Annual Report*, 1955, p. 5). Inland Steel Co. converted $21.3 million in bonds into 402,412 shares of common stock in 1954 and 1955 (*Annual Reports*, 1954, pp. 5, 7 and 1955, p. 7.) A $60,000,000 convertible bond (less $4,616,000 paid off in 1953) sold by Republic Steel Corp. to insurance companies in 1951 was fully converted into common stock in 1954 and 1955. Similar conversions took place for other companies. The result was to reduce the total funded debt shown on a company's books *but* there was an offsetting increase in common stock.

Tables 28 and 29 summarize the bonds and stocks sold by 16 steel companies from 1946 to 1956. The data were obtained from annual reports and prospectuses issued by these companies. This tabulation is not a complete record of all external financing because it omits all short term borrowing from insurance companies and banks, borrowing from customers (for example, by Pittsburgh Steel Co., Republic Steel Corp., and Jones and Laughlin Steel Corporation), issuance of securities to acquire other properties (for example, by Colorado Fuel & Iron Corp., Crucible Steel Co., and Sharon Steel Co.), and sale of stock under employee options (for example, National Steel Corp. obtained $3.7 million from the sale of common stock to employees from 1946 to 1955; United States Steel Corporation obtained about $30 million from the sale of common stock to employees from 1954 to 1956).

As against these exclusions which hold down the total shown, the tabulation does not show the extent to which debt was retired as a result of sinking fund operations and repayments of serial obligations.

In the three years, 1953 to 1955, used in the Union brief, the 16 steel companies sold $555.4 million in stocks and bonds or a considerably larger amount than the increase of $167 million in funded debt reported by the Union.

In the eleven year period, 1946 to 1956, these 16 steel companies sold $1,498.5 million of securities. This total was divided as follows among different types of securities.

	Millions of Dollars
Bonds	1,002.5
Convertible Debentures	324.5
Common and Preferred Stock	171.5
Total	1,498.5

TABLE 28

Total Stocks and Bonds Sold, 16 Steel Companies

1946-1956

Year	Amount
1946	$ 67,163,660
1947	51,300,000
1948	71,500,000
1949	60,800,000
1950	113,720,000
1951	227,341,833
1952	203,096,000
1953	29,624,867
1954	300,000,000
1955	225,756,800
1956	148,275,080
Total	1,498,578,240
Bonds	1,002,540,527
Convertible Bonds	324,491,700
Common and Preferred Stock	171,546,013
Total	1,498,578,240

TABLE 29

Sales of Bonds and Stocks, 16 Steel Companies
1946-1956

1946		
Crucible Steel Co.	1st mortgage 3-1/8/66 ($24,300,000 of which $12,461,340 were to retire bonds)—net	$ 11,838,660
Inland Steel	2.65/76	50,000,000
Sharon Steel Co.	150,000 shares of common at $35.50	5,325,000
	Total	67,163,660
1947		
Jones & Laughlin Steel Corp.	2-3/4/67 ($60,000,000 of which $28,700,000 were to retire bonds)—net	31,300,000
Wheeling Steel Corp.	3-1/4/67	20,000,000
	Total	51,300,000
1948		
Armco Steel Corp.	3/68	35,000,000
Inland Steel Co.	3/78	20,000,000
Sharon Steel Co.	3-3/8/52-68	6,000,000
Allegheny Ludlum Steel Corp.	107,383 shares of preferred stock	10,500,000
	Total	71,500,000
1949		
Bethlehem Steel Corp.	3/79	50,000,000
Colorado Fuel & Iron Corp.	4/64	10,800,000
	Total	60,800,000
1950		
Colorado Fuel & Iron Corp.	4/64	3,000,000
Granite City Steel Co.	99,414 shares of common	3,400,000
Jones & Laughlin Steel Corp.	3/75	10,000,000
Kaiser Steel Corp.	1,600,000 shares of preferred and 800,000 shares of common	37,320,000
Kaiser Steel Corp.	3-3/4/57-70	60,000,000
	Total	113,720,000
1951		
Armco Steel Corp.	819,737 shares of common	32,500,000
Crucible Steel Co.	3-1/2/66	5,000,000
Granite City Steel Co.	284,060 shares of common	6,000,000
	102,265 shares of convertible preferred	9,700,000
Pittsburgh Steel Co.	3-3/4/71	5,000,000
Republic Steel Corp.	3/66 Convertible bonds	60,000,000
Sharon Steel Corp.	174,137 shares of common	6,852,933
Wheeling Steel Corp.	3-1/2/55 convertible bonds (converted in 1955 into common)	14,238,900
Youngstown Sheet & Tube Co.	3-1/4/76	25,000,000
Allegheny Ludlum Steel Corp.	81,347 shares of pfd.	7,800,000
Jones & Laughlin Steel Corp.	3/75	30,000,000
Jones & Laughlin Steel Corp.	1,000,000 common at $25.25 per share	25,250,000
	Total	227,341,833

TABLE 29 (continued)

Sales of Bonds and Stocks, 16 Steel Companies
1946-1956

1952		
Inland Steel Co.	1st mortgage 3.20/82	$ 25,000,000
	convertible 3-1/4/72	24,496,000
National Steel	3-1/8/82 ($55,000,000 of which $40,000,000 used to retire bonds)—net	15,000,000
Youngstown Sheet & Tube Co.	3-3/8/82 ($43,100,000 of which $27,000,000 in exchange for 1st mtg. 2-3/4/70)—net	16,100,000
Armco Steel Corp.	3/64	25,000,000
Colorado Fuel & Iron Corp.	4-1/4/72	30,000,000
Colorado Fuel & Iron Corp.	4-3/4/66 convertible bonds	10,000,000
Crucible Steel Company	3-1/2/66	17,500,000
Granite City Steel Co.	4-1/4/54-67	20,000,000
Pittsburgh Steel Co.	3-3/4/71	20,000,000
	Total	203,096,000
1953		
Youngstown Sheet & Tube Co.	3-3/8/82	6,900,000
Armco Steel Corp.	4/56-60	1,224,867
Granite City Steel Co.	4-1/4/54-67	5,000,000
Granite City Steel Co.	4-5/8/67	3,500,000
Kaiser Steel Corp.	4-3/4/73	8,000,000
Pittsburgh Steel Co.	4-3/4/73	5,000,000
	Total	29,624,867
1954		
U. S. Steel Corp.	1.30 to 2.65 per cent debentures due serially to 1964	300,000,000
1955		
Colorado Fuel & Iron Corp.	convertible 4-3/4/66	5,000,000
Granite City Steel	4-1/2/73	10,000,000
Bethlehem Steel Corp.	convertible 3-1/4/80	191,659,000
Wheeling Steel Corp.	convertible 3-3/4/75	19,097,800
	Total	225,756,800
1956		
Crucible Steel Co.	164,117 shares of common at $40	6,564,680
Inland Steel Co.	1st mtg. bonds 3-1/2/81	50,000,000
Allegheny Ludlum Steel Corp.	4/81	16,377,000
Bethlehem Steel Corp.	conversion of 3-1/4/80 into common stock	20,333,400
National Steel Corp.	3-7/8/86	55,000,000
	Total	148,275,080

The changes in long term debt in the steel industry can be checked against the composite balance published by the American Iron and Steel Institute each year. On December 31, 1945, the long term debt maturing in more than one year was $472.6 million for 56 companies. As of December 31, 1955, the total was $1,538.1 million for 51 companies. Thus, in that 10 year period, net long term debt increased by $1,065.5 million. The American Iron & Steel Institute balance sheet data reflect the effect of bond retirements and sink-

ing fund operations and also exclude bonds or notes due in less than one year. During this same period the 16 companies sold $1,205.6 million in notes and bonds including convertible bonds. Many of the convertible bonds had been converted into common stock by the end of 1955 as was noted earlier while some of the bonds and notes had been retired through the operation of sinking funds. It is clear, that even after retirement of debt and conversions into common stock, there has been a sizable increase in the long term indebtedness of the steel industry.

The balance sheet data for common stock do not indicate the magnitude of new financing because they also reflect the payment of stock dividends. For what it is worth, the increase in common stock for the companies in the American Iron & Steel Institute sample increased by $547.9 million in the 10 year period following December 31, 1945.

Steel companies have obtained some of the funds they required by selling common stock or by selling convertible bonds. The postwar experience has shown that the issuance of convertible debentures has really involved the sale of common stock in a two step operation. *On this basis, the steel industry appears to have obtained about one-third of the proceeds from security financing through the sale of stocks in the postwar period.* It is clear, therefore, that the Union brief was completely in error when it concluded that "Raising funds for expansion through the sale of common stock to the public is rejected by the steel companies." ("Facts On Steel," p. 39.)

As is true in other industries, steel companies have had to decide what proportions of new financing properly should be obtained by increasing debt and what share from the sale of stocks. Each company has made the decision in terms of its own special situation. In making these decisions, management in every industry has been fully aware of the tax advantages attending debt financing. But whether it was in the form of debt or equity, the steel industry in the postwar years has gone into the capital markets to raise about $1.5 billion of long term capital.

The Concept of "Costless Capital"

THE Union brief's criticism of reliance upon internal financing sets the stage for its complaint that the industry wants to raise prices in order to pay for new steel plants. In its words,

> "Steel companies' stockholders, under this plan are to receive a gift—new steel plants and enlarged facilities which will increase their equity in their company, and, eventually, increase their dividends —all at the expense of American consumers who will pay the costs by paying higher prices for steel products. Gone, apparently, is the concept of 'risk' capital, of financing industrial expansion through flotation of stock or by means of borrowing on bond issues. Instead, the steel industry argues its right to collect 'riskless' capital from unwilling consumers by forcing upon them higher prices." ("Facts On Steel," pp. 38 and 39.)

Sometimes, the use of internal financing is described as a device for obtaining "costless capital." The practice of financing expansion through internal sources of funds is not unique as was indicated earlier. The use of such retained earnings is not "costless capital." As Professor McFerrin has noted:

> ". . . there appears to be some tendency to regard retained earnings as 'costless.' This is valid only from the very limited aspect of flotation costs. Actually, they should be used in such a way as to yield essentially the same rate as that earned by existing common equity, and this 'rate' is at least an approximate indication of their cost."[1]

[1] John B. McFerrin, "Financing Corporation Expansion During the Postwar Decade," *Georgia Business*, Vol. XVI, No. 4, The Bureau of Business Research, College of Business Administration, The University of Georgia, October 1956, p. 5.

It is true that all earnings of a company are derived from the revenues received from its customers. Retained earnings represent that part of the revenues which, together with dividends, comprise the earnings on stockholder capital invested. When earnings are not distributed, the stockholder foregoes dividend income and hence, there is a real cost to him. It is risk capital—not "riskless capital."

When these earnings are paid as dividends and then stocks are sold to a corporation's stockholders, there apparently is no criticism. But if the same funds required for expansion are retained in the business then the Union finds that there is something wrong with the process. Actually, both procedures yield substantially the same result. However, it must be recognized that when dividends are paid and then new stock is sold, the stockholder has greater choice in deciding whether to use the income obtained to reinvest in the business or in some other way. Many firms provide for periodic stock dividends to give the stockholder tangible evidence of his reinvested earnings. Of course, if the stockholder wants to sell these stock dividends, he is free to do so and thus, at such times, does have a choice as to how to use those funds.

It is interesting to note that when Citizens Utilities gave its stockholders an alternative of cash dividends or stock dividends in 1956, about three-fourths of the stockholders elected the latter alternative.

As the need for funds to finance expansion increased in 1956 and early 1957, many companies paid stock dividends instead of cash dividends in order to retain the cash to finance their plant and equipment programs. United Air Lines, for example, early in 1957, reduced its cash dividend and paid a stock dividend for this specific purpose.

According to Professor Arthur Stone Dewing:

> *"The reinvestment of surplus earnings is, in the end, a question of the anticipated relative return on capital.* It was pointed out, in connection with the disposal of the surplus, that the proportion of net earnings retained in the business, rather than paid out in dividends, is entirely a matter of expediency. Hence, barring fraud and misrepresentation, the directors may keep for the use of their corporation as much of the earnings as they wish. *Their action is, in the end, a reconciliation of two motives—a desire to gratify the stockholders, thereby maintaining the investment credit of the corporation, and a desire to secure additional capital without increasing the liability to the public, thereby strengthening the credit of the corporation with the banks.* The particular balance between these two motives will rest, very largely, upon the policy of expansion then being followed by the directors. A static business, having no plans for enlargement, can distribute all its earnings as dividends without seriously affecting its credit. An expanding business cannot."[1] (*Italics* added.)

The Union contends that "The public is called upon to provide the funds, but it is shut out of participation in the profits to be realized from the use of these funds." ("Facts On Steel," p. 39.) The Union brief further claims that "Corporate executives, in essence, admit that they can fix prices at will, irrespective of market conditions, and they propose to 'fix' prices higher and higher." ("Steel and the National Economy," p. 18.) These statements represent a complete misreading of the pricing and investment process. This claim apparently assumes that an individual steel company is free to charge any price for its product and then take the "extra money" obtained and buy new plants and equipment.

In the first place, it must be emphasized that an individual steel company cannot set

[1] Arthur Stone Dewing, *Financial Policy of Corporations*, Fifth Edition, Vol. II, Ronald Press, New York, 1953, p. 853.

prices arbitrarily without any relationship to market forces. Prices set excessively high without regard to market conditions would result in a shift to substitute metals and to other materials and would be accompanied by a reduction in sales and in the volume of profits. Such a price would be self defeating and fail to achieve its objective. Paradoxically, the funds such higher prices were allegedly designed to obtain would not be forthcoming. Moreover, they would not be required because of the idle capacity which would develop in the industry. An individual steel company is as much concerned as unions should be that it does not price its products out of the market.

During most of the postwar period, this has not been the problem for steel. On the contrary, steel prices apparently have been too low in terms of how much users were willing to pay. Otherwise, how would one explain the "gray markets" for steel, conversion deals, and other evidences that at the prevailing price level there was not enough steel produced to satisfy the enormous demand?

Secondly, there is considerable confusion in the Union brief concerning who is providing the funds for reinvestment. Such funds are not supplied by the consumer. They are supplied by the stockholder when he foregoes dividend income.

Professor McFerrin of the University of Florida describes retained earnings as "new equity funds."[1] The funds are supplied by the public or the consumer only in the sense that *all* funds received by a corporation from its sales must come from its customers. If the price is set too high, the consumer will not buy as much and there will be no funds forthcoming. *The consumer makes his decision to buy or not to buy a product in terms of the price asked. He does not make his decision on the basis of what a company will do with the funds received.*

[1] McFerrin, *op. cit.*, p. 4.

Similarly, Professor William A. Paton of the University of Michigan has pointed out that:

> "Actually *earnings retained in the corporate enterprise are a part of capital,* in the over-all administrative and economic sense. *They are just as much a part of the shareholder's stake in the business as are the funds which he originally invested.* They are a part of the total layer of risk funds, supporting the claims of creditor-investors. If the earnings were disbursed to the shareholder through dividend action, and later the same funds (or what was left after taxes) were invested in additional shares, there would be no question as to the propriety of treating the new investment as capital. There is no material difference in the situation when the funds are invested directly by corporate management, without being passed through the hands of the stockholders. It is true that earnings may be unnecessarily or unwisely retained, but it is also true that original investments of capital may be unnecessary or unwise."[2] (*Italics* added.)

It is interesting to note that the various authorities who have dealt with the question of reinvestment of retained earnings do not appear to have been informed that these funds were diverted from consumers as the Union brief alleges. Rather, they usually recognize that the reinvestment of these funds instead of the payment of dividends involves a decision by the Board of Directors concerning funds earned on the stockholder's investment.

The Union's claims and interpretations concerning the relationship between price policy and financing expansion do not find support either in theory or in fact. Internal sources now as in the past continue to provide the major funds for financing plant and equipment in manufacturing industries. The practice of the steel industry in this connection is fairly typical rather than unique.

[2] William A. Paton, *Shirtsleeve Economics*, Appleton-Century-Crofts, Inc., New York, 1952, p. 249.

APPENDIX A

American Iron and Steel Institute Income Statement for the Steel Industry

THROUGHOUT the volume "Facts On Steel: Profits, Productivity, Prices and Wages 1956," reference is made to various data showing the relative importance of steel profits before and after taxes, wages and material costs. In most tables, these data are shown only for the years, 1939, 1947, and 1950 to the first quarter of 1956. All of the tables do not cover the same number of companies. Thus, Table 2 (p. 9), Table 3 (p. 10), Table 4 (p. 13), tabulation on page 15, Table 5 (p. 16), Table 6 (p. 18), Table 7 (p. 19), and Table 8 (p. 20) cover data for 25 companies. In contrast, data shown in Tables 9 and 10 on page 21 cover 22 companies, Table 11 (p. 23) covers 11 companies and Table 12 on page 23 covers 9 companies. In light of the difference in coverage as between the tables, it is difficult to combine the different tables even though most of them are designed to show either profits, wages and salaries or materials as a percentage of the sales dollar. In order to fill in the missing years and to determine the distribution of the sales dollar, it would require a complete reworking of the Union's data plus the collection of data for the missing years.

There is no need to undertake such a comprehensive statistical survey since usable data are already available in compilations prepared by the American Iron and Steel Institute. The AISI data are available since 1939. For the period 1939 to 1942, the AISI series covers 31 companies. Since 1943, the number of companies covered in any particular year has ranged between 48 and 59. It is clear, therefore, that the Institute's figures have a somewhat broader coverage than do the figures contained in the United Steelworkers' document since the AISI includes the 25 companies as well as a number of smaller companies. The AISI data do not show a significantly different picture as to trends from the figures compiled by the Union. Thus, the net profits as a percent of sales shown by the two series is as follows:

Profits After Taxes as Percent of Sales Dollar

Year	AISI	Union Study 22 Companies
1939	5.1	5.3
1947	6.1	6.2
1950	8.1	8.0
1951	5.7	5.7
1952	5.0	4.9
1953	5.6	5.6
1954	6.0	6.1
1955	7.8	7.9

It will be noted that in no year was the difference more than two-tenths of a percent between the two series and it was that wide in only one year (1939). A similar picture is shown when the AISI data for employment costs are compared with the Union's data for 11 companies as shown on page 23.

Employment Costs as Per Cent of Sales Dollar

Year	AISI	Union Study 11 Companies
1939	39.0	40.5
1947	36.7	38.8
1950	33.0	35.2
1951	32.3	34.7
1952	34.9	37.8
1953	34.0	36.4
1954	36.7	38.7
1955	33.5	35.5

It will be noted that in general, the AISI data show a somewhat smaller percentage of the sales dollar devoted to employment costs than do the Union data. However, the trends shown by the two series are generally the same.

A comparison of the material costs as a percent of sales also shows the same type of picture with the data in the AISI series, showing material costs about 3½ percentage points higher than the data for the 9 steel companies used by the Union in such years as 1939, 1954, and 1955. In the other years, the AISI ratio also was higher than the Union's figure but by a little less than 3½ per cent.

In light of the comparisons shown above, it is clear that the AISI figures can be used to check the experience in the missing years. In addition, the AISI figures give a more comprehensive picture of what happened in the industry and make possible a comparison of the various elements in the sales dollar on a more consistent basis than do the Union's data.

APPENDIX B

What the Authorities Say About Financing Expansion

The following excerpts by leading authorities show that they consider internal financing of expansion to be of considerable importance and a perfectly proper and conventional method to be used.

H. G. Guthmann and H. E. Dougall

"*Many businesses, especially small concerns, find retained earnings the only source of equity funds because of the difficulty or impossibility of selling stock. Even large industrials and railroads have found retained earnings a far more important source than the sale of stock. Only in the public utility field has the reverse been true.* In the prosperous expansion period after World War II, 1946-1953, approximately a half of corporate capital structure growth was retained earnings, and a half security financing; of the latter, about two-thirds were bonds and notes, and one-third stocks. Current debt, in the forms of bank loans, accounts payable, income tax liability, and accrued expenses, accounted for about as much growth as security financing."[1] (*Italics* added.)

Neil H. Jacoby and J. Fred Weston

"Economic theorists have recognized the importance of the availability of internal funds for the volume of business investment . . . the uses of internal funds are crucial for investment regularization, both because *they finance a large proportion of business asset expansion* and because they are under the control of business managements to a considerably larger degree than are external funds."[2] (*Italics* added.)

[1] H. G. Guthmann and H. E. Dougall, *Corporate Financial Policy*, Third Edition, Prentice-Hall, Inc., New York, 1955, p. 507.

[2] Neil H. Jacoby and J. Fred Weston, "Financial Policies for Regularizing Business Investment," in *Regularization of Business Investment*, A Conference of the Universities—National Bureau Committee for Economic Research, Princeton University Press, 1954, pp. 395-396.

Arthur Stone Dewing

"A corporate enterprise may grow large by the construction of new plants, by additions to already existing plants, by bringing into existence subsidiary enterprises to be coordinated—so far as operating control is concerned — with the main business of the corporation. *The capital necessary to meet the cost of a policy of internal growth may come from the continuous reinvestment of surplus earnings.* This is the source of new capital to be relied upon by corporations during the years of youth and adolescence when the rate of return on the invested capital is exceedingly large.[3] If the corporation is engaged in an unusually hazardous business, this may be the only available source of new capital. The inherent risks are too great to enlist the aid of new capital."[4] (*Italics* added.)

[3] "The Carnegie Steel Company, the Ford Motor Company, the Atlantic and Pacific Tea Company—in fact, all the chain store corporations during the periods of their early growth—conform to this pattern. On the other hand, it is doubtful if there is a single instance of internal growth to any considerable size by the reinvestment of surplus earnings alone. In the vast majority of cases this source of new capital is supplemented at irregular intervals by at least some investment of capital from the outside. Although most of the capital used by F. W. Woolworth for the expansion of his chain of stores came from earnings, numerous instances are on record in which he took in, as partners, men who brought to the chain of expanding stores new stores which they had developed. An understanding of these subordinate sources does not minimize the paramount importance of earnings as a source of new capital; they show how improbable it is for a large business to develop out of mere earnings alone.

"As the corporation grows larger by the liberal and constant investment of surplus earnings, an increasing proportion of capital is brought in from outside the corporation. Sometimes (as with the Boston Edison Company) it is capital continually subscribed by the stockholders, sometimes (as with the Southern California Edison Company) it is capital obtained by the constant emission of new bonds; and sometimes (as with the American Telephone and Telegraph Company) it is through many expedients, all designed, and designed with skill, to encourage new investment from old stockholders, from employees, and from the public. As new capital from the reinvestment of earnings is the chief means for the expansion of corporations during the period of their youth, before their securities have acquired an investment standing, so the investment of new capital derived from the sale of stocks and bonds belongs especially to the period of maturity of a corporation, when its securities have attained a high standing among investors."

[4] Arthur Stone Dewing, *Financial Policy of Corporations*, Fifth Edition, Vol. II, Ronald Press, New York, 1953, pp. 852-853.

Financial Handbook

"Factors Determining Need of Financing.—*The need of financing in expansion depends upon the amount of cash derived from depreciation, retained earnings, and surplus working capital, in relation to the new capital required.* Where public financing is practical, or combinations can be effected by exchange of stock, there is added incentive to expand aggressively as opportunity offers.

"In the railroad, public utility, and other heavy industries, where a heavy plant investment is required and the rate of earnings on capital investment is relatively low, expansion almost always results in financing. In the manufacture of aluminum a large supply of cheap electrical power is needed, so that a heavy investment in hydro-electric properties has been necessary. *The Aluminum Co. of America has never paid large dividends on its common stock, using earnings for expansion. Additional capital has been obtained through the sale of its preferred stock and bonds.*"[1] (*Italics* added.)

Joel Dean

"A company, in addition to exploring and measuring its demand for capital funds, must face the problems of determining where the money will come from. Two sources, internal and external, may be distinguished. A company's chief internal sources of supply of funds for capital expenditures are depreciation and retained net profits. To distinguish between these two in the apportionment of internal investment is illusory. The chief managerial problems in respect to internal sources are forecasting the amount of cash that will be generated, and deciding how much of earnings to pay out in dividends and how much to plow back in capital expenditures. . . .

"Retained earnings are a major source of capital funds. Plow-back policy is affected by many considerations, such as opportunities for investment inside the company as opposed to opportunities outside, regularity of stockholders' income, reserves for contingencies and growth, and the effect of plowing back on cost of capital from outside. . . ."[2]

Joseph Howard Bonneville and Lloyd Ellis Dewey

"Many businesses prefer to grow gradually and normally from the inside; such growth is effected by continually reinvesting in the business considerable portions of its earnings. This *plowing in* of profits necessarily reduces the possible dividend payments by exactly the amount put back into the business."[3]

John B. McFerrin

"As here defined, internal funds account for about 75 per cent of the gross volume of funds absorbed by corporations. It seems appropriate at least to raise the question as to whether or not non-financial businesses are becoming self-sustaining and will in time be freed from the guiding influence of the capital market mechanism altogether.

"That they have not yet done so is seen from the fact that some 25 per cent of the gross volume of funds absorbed by corporations during the 1946-1955 period were from external sources. Bank loans and mortgages amount to some $22 billion, or about 7 per cent of the gross. This is hardly excessive. Numerous smaller corporations can look to these sources alone for external funds."[4]

[1] Jules I. Bogen, Editor, *Financial Handbook*, Third Edition, Ronald Press, New York, 1948, p. 831.

[2] Joel Dean, "The Concept and Economic Significance of Regularization of Business Investment," in *"Regularization of Business Investment," op. cit.*, pp. 46 and 47.

[3] Joseph H. Bonneville and Lloyd E. Dewey, *Organizing and Financing Business*, Fifth Edition, Prentice-Hall, Inc., New York, 1952, p. 184.

[4] John B. McFerrin, "Financing Corporation Expansion During the Postwar Decade," *Georgia Business*, Vol. XVI, No. 4, The Bureau of Business Research, College of Business Administration, The University of Georgia, Athens, Georgia, October 1956, p. 3. See also: Hiram L. Jome, *Corporation Finance*, Henry Holt & Company, New York, 1948, Chapter 14; Floyd F. Burtchett and Clifford M. Hicks, *Corporation Finance*, Harper & Brothers, New York, 1948, pp. 546-550; William H. Husband and James C. Dockeray, *Modern Corporation Finance*, Third Edition, Richard D. Irwin, Inc., Chicago, 1952, Chapter 25; Sergei P. Dobrovolsky, *Corporate Income Retention, 1915-43*, National Bureau of Economic Research, 1951.

Importance of Steel Prices in Consumer Price Index

by JULES BACKMAN, Professor of Economics
NEW YORK UNIVERSITY

WHAT impact does a change in steel prices have on the consumer price index? At best, only a rough approximation can be obtained. To determine the answer, it is useful to examine the components of that index. The detailed breakdown is shown in Table 1. The more important products affected directly by a rise in steel prices and their relative importance in the index as of December, 1956, appear to include the following.

Item	Per Cent Weight in Consumer Price Index
Cabinet kitchen sink	0.1
Water heater	0.8
Sink faucet	0.3
Major household appliances (electric refrigerators, cook stoves, electric sewing machines, vacuum cleaners, etc.)	2.1
Small household appliances: toasters, electric	0.2
Tools	0.3
Automobiles, new	3.0
Automobiles, old	1.5
Auto repairs	1.2
Razor blades	0.1
Radios	0.3
TV sets	0.8
Toys	0.3
Sporting goods	1.1
Total	12.1

The precise relative importance of products in which the steel content is a significant item probably will be different from the 12.1 per cent shown in the above tabulation. Some items which are affected to a minor extent have been omitted. Included in this category are canned fruits and vegetables (1.2 per cent) and beer (1.5 per cent) for which the cost of cans, to the extent they are used, will be affected. Similarly, no allowance is made for the steel which is included in a new home.

On the other hand, the proportions of the consumer price index shown in the tabulation cover the *entire* weight for broad categories of products, many of which do not contain steel. This is clearly the case for toys (0.3 per cent), sporting goods (1.1 per cent), and to a considerable extent for auto repairs. In addition, the tabulation includes the full weight for old autos because their prices tend to be related to those of new cars although it is obvious that the rise in steel prices has no effect upon the cost of producing a used car.

It is probable that, in terms of relative importance, no more than 10 per cent to 15 per cent of the components of the consumer price index are directly affected by a rise in steel prices.

Moreover, for these items steel is only a small proportion of total cost. The American Iron & Steel Institute has reported that steel accounted for the indicated proportions of the list price for the products shown as of August, 1956.

Importance of Steel Prices in Consumer Price Index

	Steel Costs as Per Cent of List Price
Automatic toaster, 2 slicer	4.4
Washing machine, 1 tub, electric	5.3
Gas range, 4 burner	6.6
Electric refrigerator, 9-10 cubic feet	5.8
Automobile, average 4 door	10.1

Source: American Iron and Steel Institute, *Charting Steel's Progress*, 1956 edition, p. 67.

If it be assumed that, on the average, steel accounts for between 5 per cent and 10 per cent of the prices of these goods and services, the cost of the steel would equal ½ of 1 per cent to 1½ per cent of the consumer price index. When allowance is made for the longer run indirect effects, namely, the higher cost of plant and equipment, the total impact will be moderately greater. Nevertheless, it seems clear that a rise of 4 per cent in steel prices is equal to a very small fraction of 1 per cent of the consumer price index. The direct impact of the rise in steel prices is nominal.

The significance of this change in steel prices may be highlighted by several illustrations. The 4 per cent steel price increase probably will have a smaller impact on the average consumer than either a:

One cent a quart (about 4 per cent) increase in milk prices. Milk accounts for 2½ per cent of the CPI and other dairy products for an additional 1½ per cent, *or* a

One cent a gallon (more than 3 per cent) increase in gasoline prices. Gasoline accounts for 2.4 per cent of the CPI, *or* a

One cent a pack (about 4 per cent) increase for cigarettes, which account for 1.8 per cent of the CPI, *or* a

One cent a loaf (about 5 per cent) increase for bread, which has a weight of 1.6 per cent in the CPI.

In August, 1956, Ewan Clague, U. S. Commissioner of Labor Statistics, observed that the 6¼ per cent rise in steel prices at that time would have a "negligible" effect on the consumer price index because the amount of steel in the consumer dollar is "tiny." (*Wall Street Journal*, August 27, 1956). The foregoing analysis supports Mr. Clague's 1956 appraisal and that conclusion would be equally applicable today.

An examination of the changes in steel price and the consumer price index in the past also reveals little interrelationship. The following tabulation shows the change in the CPI in the periods after major changes in steel prices since the end of the war.

Month of General Change in Steel Prices	Period Measured	Per Cent Change: Finished Steel Prices	Per Cent Change: Consumer Price Index
February 1946	Jan. 1946 — July 1947	23.1	22.1
August 1947	July 1947 — Apr. 1948	11.7	6.9
May 1948	Apr. 1948 — June 1948	− 2.1	1.5
July 1948	June 1948 — Nov. 1949	14.8	− 1.5
December 1949	Nov. 1949 — Nov. 1950	5.5	3.8
December 1950	Nov. 1950 — June 1952	8.1	7.5
July 1952	June 1952 — May 1953	7.8	0.5
June 1953	May 1953 — June 1954	5.0	1.0
July 1954	June 1954 — June 1955	2.8	− 0.6
July 1955	June 1955 — July 1956	9.5	2.3
August 1956	July 1956 — May 1957	10.0	2.2

Importance of Steel Prices in Consumer Price Index

The changes in finished steel prices and the CPI are measured between the months preceding major price changes. Thus, for example, the first line shows the change between January, 1946 and July, 1947, the second line between July, 1947 and April, 1948, etc. It is clear that no simple or constant relationship exists between changes in steel prices and in the CPI. Only in the first postwar period was the magnitude of the rise similar for both indexes. In the spring of 1948, after steel prices were decreased, the CPI continued to rise. Between June, 1948 and November, 1949, finished steel prices rose 14.8 per cent. Nevertheless, the CPI declined by 1.5 per cent. In the year following the 1952 steel price increase, the CPI remained about unchanged (+0.5 per cent). Similarly, a 5 per cent rise in June, 1953 was followed by a rise of only 1 per cent in the CPI.

The June 1954-1955 increase of 2.8 per cent in steel prices was accompanied by a small *decline* in the CPI. In fact, between June, 1952 and June, 1955, finished steel prices increased by 16.3 per cent while the CPI increased only 0.9 per cent—and even that nominal increase was attributable to the continuing creeping rise in rents and various services which had been lagging far behind other prices in the World War II and postwar inflation.

The June 1955-July 1956 and the July 1956-May 1957 increases in steel prices of approximately 10 per cent were accompanied by increases in the CPI of slightly more than 2 per cent in each period. The continuing rise in various services, including medical and personal care, and rents, was again of major significance in these latter rises in the CPI.

A similar lack of relationship is shown if the changes in the annual average of finished steel prices and the CPI are compared. Table 3 shows the annual changes since 1940. During the World War II period from 1940 to 1944, the CPI rose steadily while finished steel prices recorded only nominal changes. Between 1940 and 1944, the CPI rose 25.5 per cent, although steel prices increased less than one per cent. In 1949, the CPI *declined* while steel prices rose 8.3 per cent. Similarly, from 1952 to 1955, the CPI recorded only nominal changes despite the rise of 17.5 per cent in finished steel prices. Here the experience was exactly the reverse of that during World War II.

This diversity of experience in the past reflects the fact that steel price trends have played an unimportant role in the trend of consumers' prices. In the light of this past experience and the negligible significance of a small rise in steel prices on the cost of living, it is difficult to understand why the most recent rise in steel prices should be expected to have a major impact on the cost of living. The fact is that until all of the important forces which can affect the general level of prices are considered, it is impossible to determine whether there will be a rise or decline in the CPI regardless of the direction of change in steel prices.

Importance of Steel Prices in Consumer Prices Index

TABLE 1

List of items priced for the Consumer Price Index and their relative importance in the all-items index, selected dates

Item	Percent of all items total			
	1947–49 average	January 1950	December 1955	December 1956
FOOD	40.0	33.3	29.6	28.7
Food at home	40.0	33.3	28.0	24.0
Cereals and bakery products	3.6	3.0	3.0	3.3
Cereals	1.7	.9	1.0	.9
Flour	.9	.6	.5	.5
Biscuit mix			.2	.1
Corn flakes	.2	.1	.1	.1
Rolled oats	.3	.1	.1	.1
Corn meal	.2	(1)	(1)	(1)
Rice	.1	.1	.1	.1
Bakery products	1.9	2.0	2.0	2.3
Bread	1.2	1.2	1.4	1.6
Soda crackers			.1	.2
Vanilla cookies	.7	.6	.6	.5
Meats, poultry, and fish	12.9	10.6	7.7	6.6
Beef	5.0	3.6	2.3	1.7
Round steak	1.9	1.4	.9	.6
Chuck roast	.7	.6	.6	.4
Rib roast	1.7	.4	.2	.1
Hamburger	.7	1.1	.5	.4
Veal cutlets	.6	.3	.2	.2
Pork	3.5	2.1	2.3	2.3
Pork chops	1.4	.9	.7	.5
Smoked ham	.9	.6	.7	.6
Bacon	.8	.5	.5	.5
Salt pork	.2	.1		
Lamb, leg	1.2	.5	.2	.2
Frankfurters		.9	.7	.6
Canned luncheon meat			.2	.2
Poultry	1.3	2.0	1.3	.9
Roasting chickens	1.3			
Frying chickens		2.0	1.3	.9
Fish	1.3	1.0	.6	.6
Fresh and frozen fin fish	.8	.7	.5	.5
Canned salmon	.4	.3	.1	.1
Canned tuna			.2	.2
Dairy products	7.5	6.1	4.1	4.0
Butter	2.6	.9	.5	.4
Cheese, American process	.7	.6	.5	.5
Milk, fresh (delivered)	2.6	2.1	1.3	1.2
Milk, fresh (grocery)	1.6	1.6	1.3	1.3
Milk, evaporated	.4	.3	.3	.3
Ice cream		.6	.2	.3
Fruits and vegetables	8.6	7.0	6.6	4.6
Fresh fruits	2.7	1.8	1.4	1.6
Oranges	1.0	.7	.3	.4
Lemons			.1	.1
Grapefruit			.1	.1
Apples	1.0	.3	.3	.3
Bananas	.7	.5	.3	.3
Peaches			.1	.1
Grapes			.1	.1
Strawberries			.1	.1
Watermelons			.1	.1
Fresh vegetables	3.9	3.2	2.6	1.4
Potatoes	1.3	.9	.6	.4
Sweetpotatoes	.3	.1	.1	.1
Beans, green	.3	.3	.1	.1
Cabbage	.3	.2	(1)	(1)
Carrots	.3	.2	.1	.1
Onions	.4	.3	.1	.1
Tomatoes	.1	.6	.3	.3
Celery			.1	.1
Lettuce	.3	.3	.2	.3
Spinach	.2			
Canned fruits	.4	.5	.6	.6
Orange juice			.3	.3
Peaches	.2	.2	.2	.2
Pineapple	.3	.3	.1	.1
Fruit cocktail			.1	.1
Canned vegetables	.9	1.3	.6	.6
Corn	.3	.3	.1	.1
Peas	.3	.3	.3	.3
Tomatoes	.3	.3	.2	.2
Strained baby food		.3	.1	.1
Frozen fruits		.2	.1	.1
Orange juice concentrate		.1	.1	.1
Strawberries		.1	(1)	(1)
Frozen vegetables		.1	.2	.1
Peas		.1	.1	
Beans, green			.1	(1)
Dried fruits and vegetables	.6	.3	.3	.3
Prunes	.3	.1	.1	.1
Beans	.3	.1	.1	.1

Item	Percent of all items total			
	1947–49 average	January 1950	December 1955	December 1956
Food at home—Continued.				
Other foods at home	6.1	5.7	5.7	5.8
Partially prepared foods			.6	.6
Soup, vegetable			.4	
Soup, tomato				.4
Beans with pork			.2	.3
Condiments and sauces			.3	.2
Sweet pickles			.2	.3
Tomato catsup			.1	.1
Nonalcoholic beverages	1.3	2.4	1.6	1.8
Coffee	1.3	1.8	1.1	1.3
Tea			.1	.1
Cola drinks		.6	.3	.4
Fats and oils	1.3	.9	.9	.8
Margarine	.3	.2	.2	.2
Lard	.4	.1	.1	.1
Vegetable shortening	.2	.4	.3	.3
Salad dressing	.3	.2	.2	.2
Peanut butter			.1	.1
Sugar and sweets	1.2	1.0	.9	.9
Sugar	1.2	.7	.4	.4
Corn syrup			.1	.1
Grape jelly		.3	.1	.1
Chocolate bar			.3	.3
Eggs	2.4	1.4	1.4	1.3
Miscellaneous: Flavored gelatin dessert			.1	.1
Food away from home: Restaurant meals			4.6	4.7
HOUSING	23.7	25.1	32.5	33.1
Rent	13.9	11.6	8.6	8.9
Other shelter			13.2	13.4
Housing away from home				.4
Home purchase and upkeep			11.6	12.0
Home purchase			6.1	5.9
Real estate taxes			1.0	1.1
Mortgage interest			1.5	1.7
Property insurance			.2	.2
Repairs and maintenance			3.0	3.1
Repainting garage			.1	.2
Exterior house paint			.3	.0
Repainting rooms			.3	.3
Paint brush			.3	
Reshingling house roof			.2	.3
Water heater			.3	.3
Cabinet kitchen sink			.1	.1
Sink faucet			.3	.3
Refinishing floors			.2	.2
Porch flooring			.3	.3
Gas and electricity	1.8	2.1	1.9	1.9
Gas, residential heating		.2	.3	.3
Gas, other than residential heating	.9	.7	.6	.6
Electricity	.9	1.1	1.0	1.0
Solid fuels and fuel oil	2.4	1.4	1.3	1.3
Anthracite	.6	.3	.3	.3
Bituminous coal	1.1	.8	.5	.5
Briquets	(1)		(1)	(1)
Fuel oil	.3	.4	.5	.5
Range oil		.1	(1)	(1)
Wood	(1)	(1)	(1)	(1)
Coke	.4	.1		
Kerosene	(1)	(1)		
Housefurnishings	4.6	5.7	6.0	6.2
Textile housefurnishings	.6	.9	.9	.9
Sheets	.3	.3	.3	.3
Blankets	.1	.1	.1	.1
Bedspreads			.1	.1
Towels	.1	.1	.1	.1
Tablecloths			(1)	
Drapery fabric			.2	.2
Curtains	.2	.3	.2	.2
Floor coverings	.4	.4	.6	.6
Broadloom, velvet				.1
Rugs, wool, axminster	.3	.3	.4	.2
Rugs, cotton, sculter			.1	
Broadloom, rayon				.1
Rugs, felt base		.1	.1	.1
Furniture and bedding	1.6	1.6	1.8	1.7
Living room suites	.6	.5	.5	.5
Dinette sets, wood	.2	.1	.1	.1
Dinette sets, chrome		.1	.2	.3
Bedroom suites	.5	.4	.5	.5
Sofa beds	.1	.1	.2	.2
Bedsprings	.1	.2	.1	
Mattresses	.1	.3	.2	.2

See footnotes at end of table.

TABLE 1 (Continued)

RELATIVE IMPORTANCE OF CPI COMPONENTS 601

List of items priced for the Consumer Price Index and their relative importance in the all-items index, selected dates—Con

Item	Percent of all items total			
	1947–49 average	January 1960	December 1952	December 1958
Housefurnishings—Continued.				
Major household appliances	1.9	2.3	2.3	2.1
Radios	.4	(*)	(*)	(*)
Radio phonographs	(*)			
Refrigerators, electric	.7	.9	.9	.7
Cook stoves	.3	.8	.6	.5
Washing machines, electric	.3	.8	.5	.5
Vacuum cleaners, electric	.1	.2	.2	.2
Sewing machines, electric	.1	.1	.2	.2
Small household appliances: Toasters, electric		.1	.3	.2
Housewares	.1	.4	.6	.5
Dinnerware, 53-piece set	.1	.3	.2	.2
Saucepans, aluminum		.3	.3	.3
Brooms	(*)	(*)	.1	
Miscellaneous			.3	.3
Napkins, paper			(*)	(*)
Toilet tissue	(*)	(*)	.2	.2
Electric light bulbs			.1	.1
Household operation	3.6	4.3	4.9	5.4
Laundry soap and detergents	.7	.7	.6	.6
Dry cleaning	(*)	(*)	1.2	1.5
Laundry service	.9	1.0	.6	.7
Automatic laundry service			.1	.1
Domestic services	.3	1.1	.6	.6
Telephone service	.5	.7	1.0	1.1
Water	.3	.3	.3	.4
Postage	.1	.1	.2	.3
Toilet tissue	.3	.3	(*)	(*)
Ice	.6	.2	.1	
Tools			.3	.3
Other household supplies	.2			
APPAREL	12.1	13.6	9.2	9.2
Men's and boys' apparel	3.6	3.7	2.9	2.9
Men's apparel	3.3	3.3	2.6	2.6
Overcoats	.3	.3		
Topcoats	.1	.1	.2	.2
Jackets	.1	.1	.1	.1
Sweaters	.1	.1	.1	.1
Suits, heavy weight wool	1.3	1.1	.4	.5
Suits, light weight wool			.1	.1
Suits, rayon			.1	.1
Suits, cotton	(*)	(*)		
Slacks, wool	.1	.2	.1	.2
Slacks, rayon			.1	(*)
Trousers, work	.1	.1	.2	.2
Overalls	.2	.1	.1	
Dungarees				.1
Shirts, work	.1	.1	.1	.1
Gloves, work		.1	(*)	(*)
Shirts, sport			.1	.1
Shirts, business	.4	.3	.2	.3
Shorts	.1	.1	(*)	(*)
Undershirts	.1	.1	.2	.2
Union suits	.1	(*)		
Pajamas	.1	.1	.1	.1
Socks, cotton	.1	.1	.1	.1
Socks, rayon	.1	.1	.1	
Socks, nylon stretch				.1
Hats, felt	.1	.1	.1	
Boys' apparel	.3	.5	.4	.4
Overcoats	(*)			
Suits, wool	.1	.2	.1	.1
Jackets			.1	.1
Slacks	.1	.1	(*)	(*)
Mackinaws	(*)	.1		
Dungarees		.1	.1	.1
Shirts	(*)	.1	.1	.1
Shorts	.1	(*)	(*)	(*)
Women's and girls' apparel	2.7	3.3	4.1	4.0
Women's apparel	2.4	2.9	3.4	3.3
Coats, heavy weight wool	.5	.6	.5	.5
Coats, light weight wool	.2	.2	.2	.1
Coats, fur	.1	.4	.1	.1
Suits, wool	.2	.6	.3	.3
Suits, rayon			.1	.1
Dresses, wool	.1	.1	.1	.1

Item	Percent of all items total			
	1947–49 average	January 1960	December 1952	December 1958
Women's and girls' apparel—Continued				
Women's apparel—Continued				
Dresses, rayon	0.6	0.6	0.4	0.4
Dresses, cotton, street	.2	.2	.2	.2
Housedresses	.2	.1	.1	.1
Skirts, wool	(*)		(*)	
Skirts, rayon			.1	.1
Blouses, rayon		.2	.1	.1
Blouses, cotton				.1
Sweaters			.1	
Shorts, cotton, sport			(*)	
Slips, rayon and nylon	.2	.2	.2	.2
Panties, rayon	.1	.1	.1	.1
Girdles	.1	.4	.1	.2
Brassieres			.1	
Nightgowns	.1	.1	.1	.1
Stockings, nylon	.6	.6	.4	.4
Gloves	.1	.1	(*)	
Handbags			.1	
Girls' apparel	.3	.4	.7	.7
Coats	.1	.2	.2	.2
Dresses, cotton	.2	.1	.1	.1
Skirts, wool			.1	.1
Sweaters			.1	.1
Slips	(*)	(*)		
Panties	(*)	(*)	.1	.1
Anklets	(*)	.1	.1	.1
Footwear	2.4	2.2	1.6	1.6
Shoes	2.1	1.8	1.3	1.4
Men's shoes, street	.7	.6	.3	.3
Men's shoes, work	.1	.1	.1	.2
Men's rubbers, dress	(*)	(*)	.1	
Women's shoes, street	.7	.5	.6	.4
Womens shoes, play		.2	.1	.2
Children's shoes, oxfords	.6	.5	.3	.3
Shoe repairs	.2	.4	.1	.1
Other apparel	2.1	.5	.5	.5
Diapers	(*)	.2	.2	.2
Yard goods	.2	.2	.1	.1
Cotton	.1	.2	.1	.1
Rayon	.1	.1	(*)	(*)
Miscellaneous	1.9		.6	.5
Apparel services: Dry cleaning	.3	1.1	(*)	(*)
TRANSPORTATION	9.9	11.4	11.3	11.2
Private	4.6	7.0	10.0	9.7
Automobiles, new	2.3	3.7	2.9	3.0
Automobiles, used			2.0	1.5
Auto repairs	.2	.7	1.1	1.2
Tires	.1	.2	.2	.2
Gasoline	1.4	2.1	2.2	2.4
Motor oil	.2	.2	.2	.2
Auto insurance	.3	.7	1.0	.8
Auto registration	.1	.3	.3	.3
Public	3.2	3.5	1.3	1.5
Transit fares	2.1	2.5	1.0	1.2
Railroad fares	.1	.1	.3	.3
MEDICAL CARE	3.2	5.2	5.1	5.4
Medical care (excluding drugs)	2.0	4.4	4.2	4.5
Physician	1.0	1.3	1.6	1.6
Office visit	.6	.8	.7	.7
Home visit	.4	.5	.7	.7
Obstetrical care	.1	.2	.2	.2
Surgeon: Appendectomy	.1	.1	.2	.2
Specialist: Tonsillectomy	.1	.1	.1	.1
Dentist	.7	1.2	.8	.9
Fillins	.3	.9	.6	.7
Extraction	.2	.3	.2	.2
Optometric examination and eyeglasses	.1	.3	.3	.3
Hospital services	.6	.8	.2	.3
Men's pay ward	.2	.3	.1	.1
Semiprivate room	.4	.3	.1	.1
Private room				
Group hospitalization		1.0	1.0	1.3
Accident and health insurance	.2			

See footnotes at end of table.

Importance of Steel Prices in Consumer Price Index

TABLE 1 (Continued)

List of items priced for the Consumer Price Index and their relative importance in the all-items index, selected dates—Con.

Item	Percent of all items total			
	1947–49 average	January 1950	December 1952	December 1956
Prescriptions and drugs	0.4	0.6	0.9	0.9
Prescriptions, narcotic and nonnarcotic	.2	.4	.3	.3
Penicillin tablets			.1	.1
Multiple vitamin concentrates			.2	.2
Aspirin	(1)	.1	.2	.2
Milk of magnesia	.1	.2	.1	.1
Tincture of iodine	.1	.1		
PERSONAL CARE	2.4	2.4	2.0	2.2
Men's haircuts	0.9	0.7	0.6	0.7
Permanent waves	.2	.2	.1	.1
Shampoos and wavesets	.3	.3	.2	.2
Toilet soap	.4	.3	.2	.2
Cleaning tissues			.1	.1
Toothpaste	.3	.3	.2	.2
Shampoo			.1	.1
Shaving cream			.1	.1
Home permanent refill		(1)	(1)	.1
Face powder	.1	.3	.1	.1
Face cream			.1	.1
Razor blades	.1	.1	.1	.1
Sanitary napkins	.1	.2	.1	.1
READING AND RECREATION	2.7	3.3	3.3	3.1
Radios	(2)	0.3	0.4	0.3
Television sets		.9	.9	.8
Television repairs			(1)	(1)
Motion picture admissions	1.5	2.2	1.4	1.6
Adult	1.5	2.2	1.1	1.3
Child			.3	.3
Velocipedes		.9		
Toys			.3	.3
Sporting goods			1.3	1.1
Newspapers	1.2	1.5	1.0	1.0
OTHER GOODS AND SERVICES	2.0	4.0	5.0	5.1
Cigarettes	1.5	1.9	1.7	1.8
Cigars	.3	.2	.1	.1
Pipe tobacco	.2	.1		
Beer		1.8	1.4	1.5
Whiskey			1.0	.9
Miscellaneous			.8	.8
UNALLOCATED ITEMS	4.2			

[1] Less than 0.05 percent.
[2] Included in reading and recreation.
[3] Included in household operation.
[4] Included in apparel services.
[5] Included in housefurnishings.

Table 2

COMPARISON OF B.L.S. CONSUMER PRICE INDEX WITH B.L.S. INDEX OF FINISHED STEEL MILL PRODUCT PRICES MONTHLY SINCE 1940

	B.L.S. Consumer Price Index—1947-49 = 100																	
Month	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	59.5	60.3	67.0	72.2	74.4	76.1	77.8	91.9	101.3	102.7	100.6	108.6	113.1	113.9	115.2	114.3	114.6	118.2
Feb.	59.9	60.3	67.5	72.4	74.2	76.0	77.6	91.8	100.5	101.6	100.4	109.9	112.4	113.4	115.0	114.3	114.6	118.7
Mar.	*59.7	60.5	68.4	73.5	74.2	76.0	78.0	93.7	100.2	101.9	100.7	110.3	112.4	113.6	114.8	114.3	114.7	118.9
Apr.	59.7	61.1	68.8	74.3	74.6	76.1	78.5	93.7	101.6	102.1	100.8	110.4	112.9	113.7	114.6	114.2	114.9	119.3
May	59.9	61.5	69.4	74.9	74.9	76.7	78.9	93.5	102.3	101.8	101.3	110.9	113.0	114.0	115.0	114.2	115.4	119.6
June	*60.1	62.6	69.6	74.7	75.1	77.3	79.8	94.2	103.1	102.0	101.8	110.8	113.4	114.5	115.1	114.4	116.2	120.2
July	60.0	63.0	70.0	74.2	75.5	77.5	84.6	95.0	104.3	101.4	102.9	110.9	114.1	114.7	115.2	114.7	117.0	
Aug.	59.8	63.5	70.3	73.9	75.7	77.5	86.4	96.1	104.8	101.6	103.7	110.9	114.3	115.0	115.0	114.6	116.8	
Sept.	*60.0	64.7	70.5	74.2	75.8	77.2	87.4	98.3	104.8	102.1	104.4	111.6	114.1	115.2	114.7	114.9	117.1	
Oct.	59.9	65.4	71.2	74.5	75.8	77.2	89.1	98.3	104.3	101.5	105.0	112.1	114.2	115.4	114.5	114.9	117.7	
Nov.	59.9	65.9	71.7	74.4	75.8	77.5	91.2	98.9	103.5	101.6	105.5	112.8	114.3	115.0	114.6	115.0	117.8	
Dec.	60.2	66.1	72.1	74.5	76.1	77.8	91.9	100.2	103.0	101.0	106.9	113.1	114.1	114.9	114.3	114.7	118.0	
Per Cent Change Dec. to Dec.		9.8	9.1	3.3	2.1	2.2	18.1	9.0	2.8	—1.9	5.8	5.8	0.9	0.7	—0.5	0.3	2.9	

* Indexes marked with * and all months after Sept. 1940 are based on prices collected for all groups of items. Indexes for other months prior to Sept. 1940 are based on food prices and estimates for other goods and services assuming an even rate of change between pricing dates.

	B.L.S. Index of Finished Steel Mill Product Prices—1947-49 = 100																	
Jan.	68.1	68.3	68.5	68.6	68.6	69.3	70.6	85.9	95.6	110.2	113.9	124.3	124.9	130.7	141.4	144.6	155.8	171.1
Feb.	68.2	68.3	68.5	68.6	68.6	69.7	73.7	86.0	96.4	110.3	114.1	124.4	124.9	130.5	140.9	144.7	157.1	173.1
Mar.	68.0	68.3	68.5	68.6	68.6	69.7	76.7	86.0	97.1	110.3	114.1	124.4	124.9	130.7	140.9	144.7	157.1	173.9
Apr.	67.5	68.3	68.5	68.6	68.6	69.7	76.7	85.9	97.1	109.9	114.2	124.4	124.9	130.7	140.9	144.8	157.1	174.0
May	68.0	68.4	68.5	68.6	68.6	69.9	76.7	85.8	95.4	109.3	114.2	124.4	124.9	134.2	140.8	144.8	158.1	174.4
June	68.0	68.4	68.5	68.6	68.6	70.6	76.9	85.8	95.1	109.0	114.3	124.4	124.5	136.3	140.9	144.8	158.2	174.3p
July	68.2	68.4	68.5	68.6	68.6	70.6	77.0	86.9	98.0	109.1	114.9	124.5	124.4	141.7	144.6	153.8	158.6	
Aug.	68.3	68.5	68.5	68.6	68.6	70.6	77.2	93.1	107.4	109.1	114.9	124.7	130.8	141.7	144.5	153.9	168.6	
Sept.	68.3	68.5	68.5	68.6	68.6	70.6	77.3	93.3	107.7	109.2	115.0	124.7	130.8	141.7	144.6	153.9	168.6	
Oct.	68.3	68.5	68.5	68.6	68.6	70.6	77.3	93.3	107.9	109.2	115.2	124.7	130.7	141.5	144.7	154.5	168.6	
Nov.	68.3	68.5	68.5	68.6	68.6	70.6	77.3	93.5	108.5	109.2	115.2	124.9	130.5	141.4	144.7	154.5	168.8	
Dec.	68.3	68.5	68.5	68.6	68.6	70.6	79.2	93.4	108.8	111.5	122.4	124.9	130.6	141.4	144.7	154.8	168.8	
Per Cent Change Dec. to Dec.		0.3	0	0.1	0	2.9	12.2	17.9	16.5	2.5	9.8	2.0	4.6	8.3	2.3	7.0	9.0	

Source: U. S. Department of Labor, Bureau of Labor Statistics.
p — Preliminary.

Importance of Steel Prices in Consumer Price Index

Table 3

COMPARISON OF B.L.S. CONSUMER PRICE INDEX WITH B.L.S. INDEX OF FINISHED STEEL MILL PRODUCT PRICES BY YEARS FROM 1940

Year	Consumer Price Index 1947-49=100	% Increase or Decrease From Previous Year	Finished Steel Mill Product Prices 1947-49=100	% Increase From Previous Year
1940	59.9	—	68.1	—
1941	62.9	5.0	68.4	0.4
1942	69.7	10.8	68.5	0.1
1943	74.0	6.2	68.6	0.1
1944	75.2	1.6	68.6	.0
1945	76.9	2.3	70.2	2.3
1946	83.4	8.5	76.4	8.8
1947	95.5	14.5	89.1	16.6
1948	102.8	7.6	101.3	13.7
1949	101.8	− 1.0	109.7	8.3
1950	102.8	1.0	115.2	5.0
1951	111.0	8.0	124.5	8.1
1952	113.5	2.3	127.2	2.2
1953	114.4	0.8	136.9	7.6
1954	114.8	0.3	142.8	4.3
1955	114.5	− 0.3	149.5	4.7
1956	116.2	1.5	162.1	8.4

Source: U. S. Department of Labor, Bureau of Labor Statistics.

BETHLEHEM STEEL CORP.,
New York, N. Y., November 19, 1957.

HON. ESTES KEFAUVER,
Chairman, Antitrust nad Monopoly Subcommittee,
Committee on the Judiciary, United States Senate,
Washington, D. C.

DEAR SENATOR KEFAUVER: In the course of my appearance before the subcommittee on October 22, 1957, you asked that I supply the names of those companies which have entered into the steel industry in a substantial way in the last 20 years and the names of those companies of a substantial nature which have gone out of business in the industry in the same period of time.

The following-named companies, each of which had on January 1, 1957, the steel producing capacity in excess of 100,000 net tons, first acquired steel producing capacity since 1937: McLouth Steel Corp., Kaiser Steel Corp., Copperweld Steel Co., Babcock & Wilcox Co., Lone Star Steel Co., Pacific States Steel Corp., Oregon Steel Mills, and Isaacson Iron Works.

Since 1937 a number of companies with substantial steelmaking capacity have ceased to do business, but the steelmaking facilities which they operated were acquired by other companies in the industry, and, therefore, it seems to me that it would be correct to say, in a broad sense, that no company of substantial nature has gone out of business since 1937.

Very truly yours,

A. B. HOMER, *President.*

BETHLEHEM STEEL CORP.,
New York, N. Y., December 19, 1957.

PAUL RAND DIXON, ESQ.,
Counsel and Staff Director, Subcommittee on Antitrust and Monopoly,
Committee on the Judiciary, United States Senate, Washington, D. C.

DEAR MR. DIXON: I acknowledge receipt of your letter of December 6, 1957, in which you remind me that I had not furnished to the subcommittee the information referred to in your letter.

I have had our records checked and neither Bethlehem Steel Corp. nor any subsidiary thereof has ever been a subscriber to or a member of American Institute of Management and neither the corporation nor any subsidiary thereof has ever paid any money to the institute.

Very truly yours,

A. B. HOMER, *President.*

National Steel.

Million $	Sales yr	Net Profit	Depreciation Cash	Cash less Depr.	Sales in million $
	1950	$118.9	$ 70.0	308.1	$537.0
	51	140.3	71.9	456.3	618.5
	52	79.6	71.6	449.4	548.6
	53	118.5	80.3	485.4	634.2
560	54	58.1	37.7	388.3	484.1
	55	96.6	40.2	485.2	622.0
	56	99.5	45.3	519.5	664.3

480

400

320

240

160

80

0

Breakeven 2,800,000,000 Net Sales per Year. 42.3% of 1956 Sales.

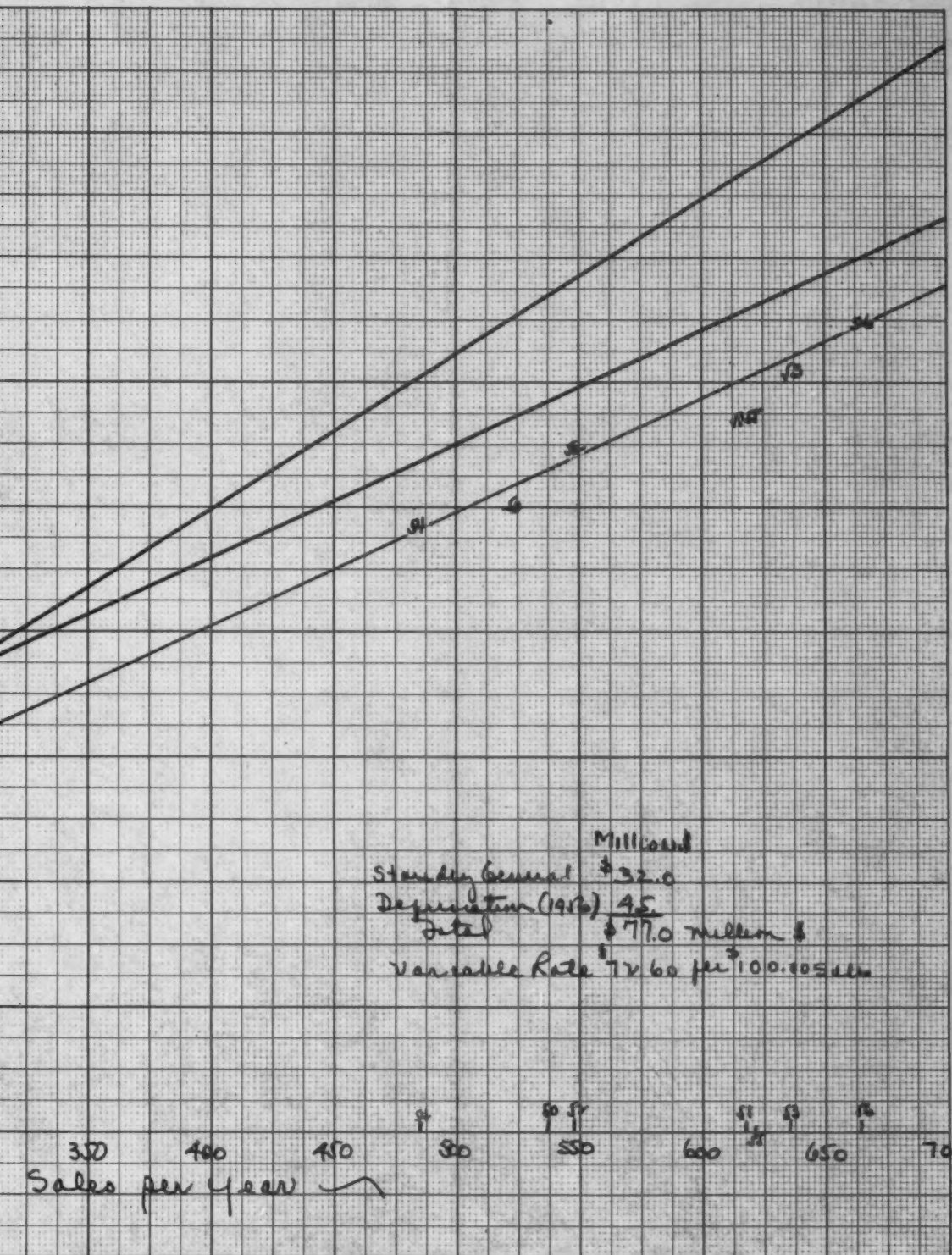
Depreciation

0 50 100 150 200 250 300

Million $

Fred V Geshwiler & Associates

95006 O - 58 - pt. 4 (Face p. 1536)


Millions
Standby General $32.0
Depreciation (1976) 45.
Total $77.0 million $
Variable Rate $7 x 60 per $100.105 sales
350
400
450
500
550
600
650
700
Sales per year